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Land policy
REVIEW

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Crisis in Missouri's Boot Heel

by CHARLES S. HOFFMAN and VIRGIL L. BANKSON

ONCE again the threat of eviction has brought into focus the distress and insecurity of impoverished, land-hungry, buffeted sharecroppers and farm laborers of the cotton counties of southeastern Missouri.

Last January several hundred of these traditionally undemonstrative people obtained national attention for their plight by sitting down on the highways for a week. Their problems are persistent, continuous—chronic, not temporary. But this winter the worries have been heightened by the prospect of wholesale transfers of mortgaged land because of high average cotton yields and comparatively low land prices. It was reported that 1,500 families had received eviction notices.

Some landowners in the area and officials of Missouri and Federal agencies are pressing for a solution, but the problems are deep-seated and tend to form a vicious circle, hard to break. They arise from a general inability to change occupations, an increase in the volume of agricultural labor, a growth in population, the sharp recurrence of peak seasons and slack seasons, accentuated by the use of machines, the workers' psychological and physical handicaps and, more particularly, persistent, engulfing poverty.

A solution will not be easy to find when so many factors are involved. Several things are necessary, among them a need for a wider understanding of conditions. This particular situation is localized, it is true, in southeastern Missouri, but its implications are much wider.

At the root of the trouble is the availability of employment opportunities, which is the most important single factor affecting a farm laborer's economic life. The accessibility of a patch of land to be farmed in the traditional sharecropper method is the most important single factor affecting the economic life of a sharecropper.

To a farm hired laborer, reasonable opportunities for continuity of employment at a living wage represent security for himself and his family; the degree of security and the standard of living are further reflected by the perquisites furnished by the employer and the wage paid.

To a sharecropper, the elimination of the yearly scramble for land, through improved tenure arrangements, represents security.

The difference between a sharecropper and day laborer is temporary and slight: This year's day laborer may have been a sharecropper last year and may be a sharecropper a year hence; the major competition between sharecroppers and day laborers therefore is for the limited security of being sharecropper. Those in both classes who cannot find land upon which to "make" a crop have no choice but to remain day laborers since few of them can change occupations because of lack of education or vocational training. They get that amount of farm work which farm operators, including the tenant and sharecropper, cannot perform.

To the farm owner, on the other hand, the employment of both the sharecropper and the day laborer represents an expense in the production of cotton and other crops and the natural tendency is to limit this expense as much as possible. Combined with the landowner's problem of curtailing labor costs for the entire year is that of having a large supply of labor on hand during peak periods which, in the cotton section, is during chopping and picking.

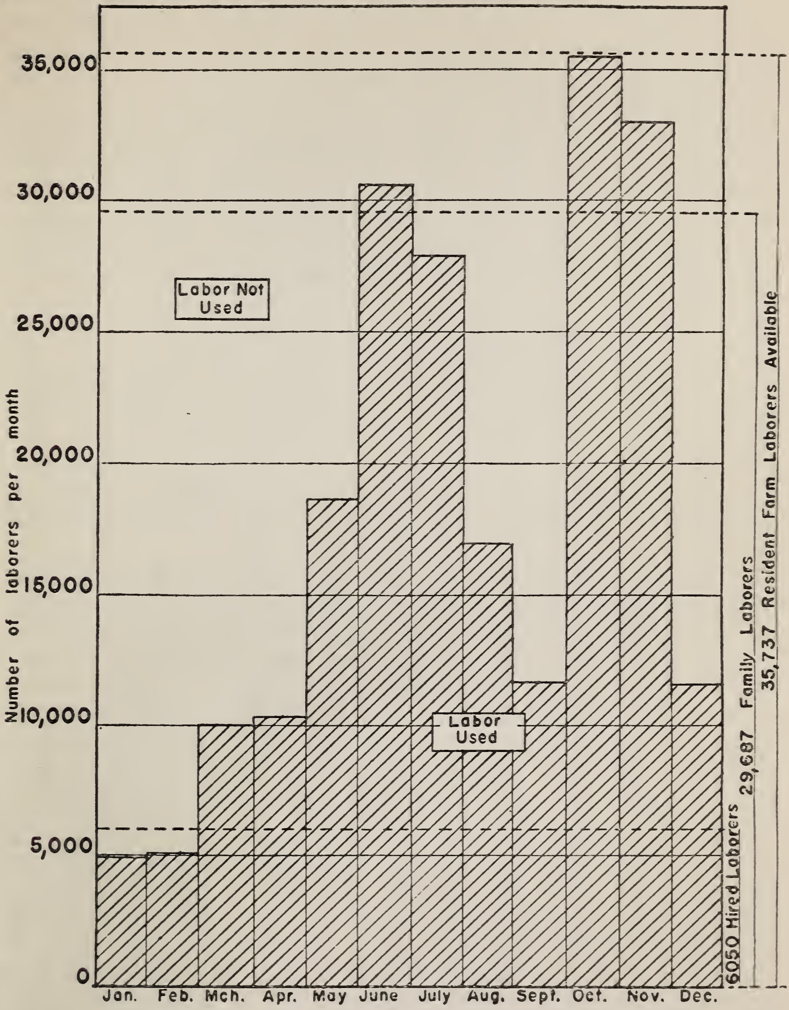
The Farm Labor Supply in the Area

The relationship between the labor requirements of the area and the labor supply is, therefore, of major interest to both the landowner and the farm laborer. By measuring the local farm labor supply (which remains relatively constant) with the labor requirements (which fluctuate from month to month), the major problem periods for both landowner and farm worker can be visualized.

The area covered by this study includes the four major cotton counties of southeastern Missouri—Dunklin, Mississippi, New Madrid, and Pemiscot—which are in the rich, level bottom lands of the upper Mississippi Delta. The land is comparatively new, insofar as cotton production is concerned.

Working on the farms of the 4 counties during the first week of January 1935 were 29,687 family laborers and 6,050 day laborers, a

COMPARISON BETWEEN FARM LABOR REQUIREMENTS AND AVAILABLE RESIDENT FARM LABOR. COTTON AREA -- SOUTHEAST MISSOURI.



total of 35,737.[1] Family laborers include all farm operators and members of their families who worked without pay on the home farm for the equivalent of 2 days during the week. Hired laborers include all who received wages for the equivalent of at least 2 days' work on the farm during the first week in January.

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[1] *United States Census of Agriculture, 1935.*

The following analysis between the available labor supply and farm labor requirements was made with full recognition of possible inaccuracies. The family labor figure will be in error to the extent that it does not include employable members of the family who were unemployed at the time of the census. On the other hand it includes family members who will not be available for employment 240 hours a month throughout the year. The number of hired laborers enumerated by the census during the first week of January was smaller than would have been the case had the enumeration been made later in the year. January is a slack season. Many unemployed laborers living on farms or located temporarily in tents and shacks at this date would not be counted in the census.

Since the 1935 census, the volume of agricultural labor has increased. So has the proportion of farm laborers to the total farm group. The growth of population through natural increase and from migration has made a large number of laborers available for employment. Labor-saving machinery has thrown additional persons out of work. The shift from the status of sharecropper to that of farm laborer has increased still further the number of men seeking employment, making the placement of unemployed farm laborers is more difficult today than in 1935.

It should not be inferred that the labor supply is always available when and where needed. Farm operators for example would probably not be available for work on other farms until they had finished the work on their own farms. In 1934 more than 84 percent of the farm operators did no paid work off their own farms.[2] This fact would indicate their unavailability for work on the larger farms during the periods of heaviest labor requirements in June, July, October, and November. Also to be considered is the mobility of the laborers. Work may be available for them in the next township or next county. If they do not know of the work opportunities, however, or if they have no means of getting there, they are not "available" even though they are a part of the total labor supply. The lack of mobility of resident laborers, therefore, may operate to decrease the actual labor supply below the potential labor supply. Such work opportunities may be lost to resident laborers and be performed by migrant laborers. Such an influx of migrant laborers would have the result of increasing the total labor supply, resulting in even greater unemployment for resident laborers.

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[2] *United States Census of Agriculture, 1935.*

Table 1.—*Man-hours required per acre in production of cotton,*[a] *and estimated allocation by months*

Harvest and preharvest operations	Total man-hours per acre [a]	Estimated allocation by months											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total	130.8	2.9	2.0	3.5	4.7	6.4	19.5	18.9	5.2	8.0	27.0	25.0	7.7
Field preparation (clear ditches, etc.)	2.0	1.0	1.0	......	......	......	......	......	......	......	......	......	......
Cutting stalks	1.0	.5	.5	......	......	......	......	......	......	......	......	......	......
Plowing	1.6	.1	.1	1.2	.2	......	......	......	......	......	......	......	......
Disking	.5	......	.1	.3	.1	......	......	......	......	......	......	......	......
Harrowing	1.0	......	......	.6	.4	......	......	......	......	......	......	......	......
Bedding and rebedding	2.6	......	......	.6	2.0	......	......	......	......	......	......	......	......
Fertilizing	2.3	.3	.3	.8	.9	......	......	......	......	......	......	......	......
Planting	1.2	......	......	......	1.1	.1	......	......	......	......	......	......	......
Cultivating	15.2	......	......	......	......	2.8	5.8	5.2	1.4	......	......	......	......
Chopping	34.0	......	......	......	......	3.5	13.5	13.5	3.5	......	......	......	......
Spraying	.7	......	......	......	......	......	.2	.2	.3	......	......	......	......
Picking	68.7	1.0	......	......	......	......	......	......	......	8.0	27.0	25.0	7.7

[a] *The man-hour labor requirements per acre were taken from "Changes in Technology and Labor Requirements in Crop Production: Cotton," Works Progress Administration, National Research Project, Report No. A-7, September 1938, pp. 22–50, showing average labor requirements per acre for 1936 in the Mississippi Delta area. The allocation by months was estimated on the basis of a general knowledge of seasonal farm operations in southeast Missouri. Total man-hours for the total acreage in cotton was obtained by multiplying man-hour per acre requirements presented above by 259,621, he total cotton acreage of the area.*

The Farm Labor Requirements in the Area

The total acreage of crops in the 4 counties was 763,828 in 1934. Of this, cotton was grown on 259,621 acres; corn on 314,520 acres; hay and sorghum forage, 81,990; winter wheat, 39,356; miscellaneous vegetables and crops, 15,211; potatoes, 1,432; miscellaneous small grains, 9,244, and miscellaneous legumes, 42,454.

The labor requirements for producing these crop acreages were computed by utilizing data obtained in the National Research Project of the Works Progress Administration in a series of studies on the subject of "Changes in Technology and Labor Requirements in Crop Production."

Labor requirements in terms of man-hours per acre for various crops and crop operations obtained from the studies for all crops except miscellaneous legumes were allocated by months to represent the periods in which they would most likely occur.[3] The method used in computing per-acre labor requirements is subject to some margin of error, but this does not disqualify its use. Total man-hour labor requirements were reduced to man-days by dividing by 10, assuming a 10-hour day, and to man-months by dividing by 240. A man-month of 240 hours makes allowance for one man working 24 days of 10 hours each.

The estimated man-month labor requirements for all crops included in the 1935 census is given in table 2. In the production of 763,828 acres of crops, the total labor requirements for all months of the year were 219,363 man-months, or an average of 18,280 man-months per month. Thus, if the work were equitably distributed throughout the year, only 18,280 persons would be needed out of 35,737 available. However, the actual estimated requirements ranged from a low of 4,940 persons working 240 hours each during January to a high of 35,523 persons working the same number of hours in October.

Peak seasons and slack seasons feature farm labor requirements. Other factors which tend to accentuate the disparity in labor requirements between the peak seasons and slack seasons are the increasing use of tractors and power farming for many processes except cotton chopping and picking, and the Federal crop-reduction program.

Evidence of a Farm Labor Surplus

Some interesting comparisons may be made between local farm labor supply and farm labor requirements from the summaries contained in table 3. First, it can be seen that the available local labor greatly exceeds the requirements for all months of the year except June, October, and November. To meet the requirements of January for 4,940 laborers,

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[3] *See table 1, Man-hours required per Acre in Production of Cotton and Estimated Allocation by Months, for method used.*

Table 2.—*Estimated total man-months*[a] *of labor required in production of crops, allocated by months*

Crop	Total man-months per year	Estimated allocation by months											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total	219, 363	4, 940	5, 166	10, 002	13, 268	18, 653	30, 667	27, 854	16, 925	11, 691	35, 523	33, 037	11, 637
Cotton	141, 166	3, 137	2, 163	3, 786	5, 084	6, 923	20, 986	20, 337	5, 517	8, 654	29, 207	27, 043	8, 329
Corn	59, 061	1, 179	2, 359	5, 373	7, 208	10, 573	6, 815	3, 276	7, 863	131	5, 504	5, 897	2, 883
Hay and sorghums for forage	2, 699	154	140	37	......	33	138	673	743	468	196	......	117
Winter wheat	3, 182	131	148	33	......	16	968	771	361	394	246	16	98
Miscellaneous small grains	622	31	35	19	8	4	......	116	266	89	31	......	23
Potatoes	319	22	17	29	36	32	33	38	76	36	......	......	([b])
Vegetables	8, 368	127	127	318	507	824	1, 585	2, 218	1, 268	1, 141	127	63	63
Miscellaneous legumes for forage and seed	3, 946	159	177	407	425	248	142	425	831	778	212	18	124

[a] *Total man-hours were first calculated upon the basis of a table similar to table 1 for each crop. Total man-months, as presented in table above were calculated from total man-hours by dividing by 240, which allowed for 24 working days of 10 hours each.*

[b] *Less than 1 man-month.*

of February for 5,166, of March for 10,002, of April for 13,268, and May for 18,653, there were available 35,737 family and hired laborers, leaving a surplus for each of these months of 30,797 to 17,084 laborers.

In June and July the surplus becomes less pronounced because the total labor requirement advances to 30,667 and 27,854, respectively, although a sizeable surplus is evident even during these months. During August and September the surplus again becomes greater, but is nearly eliminated in October when the cotton-picking requirements increase the total for the month to 35,523 persons, leaving only 214 extra workers.

If there were an equitable distribution of work opportunities to family and farm laborers, each would receive 142.5 days per year or 11.9 days per month. This average, in turn, would entitle each worker to the low employment of 3.3 days in January and 3.5 in February to the high of 22.2 days in November and 23.9 in October.

As a practical matter of performing field operations, however, most farm operators utilize their own labor and that of their families as much as possible and hire farm laborers only when necessary. In general, therefore, it can be said that the work opportunities given the farm laborer is the residue which farm operators are unable to perform.

This factor would have a material effect in decreasing the average days of work per year for the average farm laborer and increasing them for the family worker. Also, since sufficient family workers are available for performing all work requirements for most months of the year, the tendency is for the residue of work available to the average hired laborer to be concentrated in the chopping and picking of cotton. To many farm workers this tendency creates problems resulting from underemployment throughout the year and to others from unemployment during off seasons.

Unused Labor: A Many-Sided Problem

The immediate effect of a labor surplus is the unemployment of many individuals who are willing and able to work and who have no other sources of income. Even in the month of heaviest labor requirements there is not enough farm work to provide full-time employment to all resident family laborers and hired laborers. A large proportion of the farm-labor families must live 12 months on the employment obtained during the chopping and picking of cotton. Each family makes what effort it can to spread this income over a larger part of the year but even then the income is insufficient to supply the essential necessities, such as proper food, clothing, and shelter for the average farm laborer and his family.

In many respects, the causes and the effects of a labor surplus in the cotton area form vicious circles of interaction and self-perpetuation.

The lack of education may be evidenced by inability to increase the income, or to budget available income more carefully. The lack of available income causes psychological and physical, as well as economic, handicaps which materially limits the search for employment or better opportunities in the same or in other communities.

The lack of proper clothing, transportation, membership fees, and other costs prevents participation by the family in farm clubs or other vocational guidance groups from which practical education and training could be obtained. Also, the family with its meager income cannot afford a house which meets minimum standards of health and sanitation, an automobile, or other evidences of economic advantage displayed by the more fortunate families of the community.

Distinct economic levels are formed which discourage if not prevent, participation of this farm-labor family in certain community activities enjoyed by the more well-to-do families. In other words, the unfavorable economic position which creates a need for education, vocational guidance, and other community activities in a large measure prevents the family from satisfying those needs.

The family members need to know how to budget their income and how to take advantage of economic opportunities in other communities or in other vocations. The Farm Security Administration is able to reach a few of these families, making available to them instruction in farm and home management. The majority of such families, however, have no means of obtaining instruction and guidance other than through local groups sponsored by State or community organizations. The children of these families have little opportunity of receiving education beyond the elementary rural school, and very often are unable to attend beyond the first few grades. Even while attending school, the maximum benefits may not be obtained by a large number of children because of the ill effects of inadequate nutrition and the lack of proper medical care.

The public schools do not reach as many of the children of these families as would be desirable. Information covering only the farm labor group is not available, but within the total population of the area at the time of the 1930 census, approximately one child in five between the ages of 7 and 17 was not in school. The proportion of children of school age not in school is probably much larger among the farm labor than among the other rural groups because of loss of school attendance resulting from the employment of children, residence changes of the family, and inability to meet school expenses. It is true, also, that many families are indifferent toward education and do not encourage their children to attend school, even when it is possible for them to do so.

The change in status between farm laborer and cropper adds to the instability of the farm labor group. Between 1929 and 1936, 64 percent of those who were croppers in 1929 had changed their status.[4] Thirty-six percent of them became farm laborers. Among the group who were farm laborers in 1929, 20 percent became sharecroppers in 1936. The trend is from sharecropper to day laborer rather than from day laborer to sharecropper.[5]

High mobility within the farm group is also reflected in short length of residence of farm operators, including owner, manager, tenant, and sharecropper. In the four counties, 54 percent of these operators had lived on their present farms not more than 1 year.[6] Such a high frequency in the changes of farms by farm operators adds to the already high mobility among farm laborers, who may or may not be rehired on the same farm by the new operator. Causing further pressure in the localities are an influx of unemployed laborers seeking work, temporary or permanent migrants from outside the area, displacements by machine operation of farm work, and the constant increase of population.

The Nature of a Solution

Within the rural-farm population of Missouri, in 1930, there were 657 children under 5 years of age per 1,000 women aged 20 to 44.[7] Such a fertility ratio is well above replacement needs to maintain the population in its present numbers. The ratio of children per 1,000 women aged 20 to 44 in the Cotton Area is 746, or 14 percent higher than the fertility ratio for the State. The decline of employment opportunities in urban areas elsewhere has retarded the migration of the surplus population from this area. Individuals and families who formerly would have migrated to seek work are remaining and competing with the rest for the chance to earn a livelihood. Urban opportunities within the area are slight. Only 10 percent of the population of the Cotton Area live in urban residences and more than 74 percent of the rural group are on farms.[7] Many of the farm operators are not in a position to hire much outside labor or pay a very high wage. In 1929 more than 43 percent of the farm operators had gross farm incomes under $1,000, while almost a fourth of them received less than $600. The farm operators reporting these figures are mostly tenants and croppers operating small acreages.

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[4] *Unpublished data in the files of the Farm Security Administration, Region III, Indianapolis, covering sample areas in Butler, Dunklin, Mississippi, New Madrid, Pemiscot, Scott, and Stoddard Counties in southeast Missouri.*

[5] *This same trend is noted in a recent survey of a similar area. See "Plantation Organization and Operation in the Yazoo-Mississippi Delta Area," by C. L. Langsford and B. H. Thibodeaux, U. S. D. A. Technical Bulletin No. 682, Washington, May 1939.*

[6] *As of January 1, 1935, United States Census of Agriculture, 1935.*

[7] *United States Census, 1930.*

TABLE 3.—*Comparison by months of farm labor supply and requirements*

Month	Farm labor supply [a] Jan. 1, 1935			Total farm labor [b] requirements (persons)	Unused but available local labor		Average man-days work [d] for all labor if evenly divided
	Family labor (persons)	Hired labor (persons)	Total number of persons		Persons per month [c]	Percent of supply	
Average	29,687	6,050	35,737	[e] 18,280	17,457	48.8	([f])
January				4,940	30,797	86.2	3.3
February				5,166	30,571	85.5	3.5
March				10,002	25,735	72.0	6.7
April				13,268	22,469	62.9	8.9
May				18,653	17,084	47.8	12.5
June				30,667	5,070	14.2	20.6
July				27,854	7,883	22.1	18.7
August				16,925	18,812	52.6	6.6
September				11,691	24,046	67.3	7.9
October				35,523	214	.6	23.9
November				33,037	2,700	7.6	22.2
December				11,637	24,100	67.4	7.8

[a] *United States Census of Agriculture, 1935.*

[b] *From data in table 2, each man-month representing 1 person working 240 hours per month.*

[c] *Obtained by subtracting the "Total farm labor requirements" from the "Farm labor supply," including family and hired laborers.*

[d] *Obtained by dividing total man-days labor requirement for all crops for each month by 35,737, the number of persons representing the farm labor supply.*

[e] *Total number employed (219,363) divided by 12.*

[f] *For the year 142.5; for the month 11.9.*

It is evident that no favorable solution will occur without conscious effort by the communities involved, with the assistance of State and Federal agencies. To let the situation continue is to condemn a large group of employable workers to long periods of idleness and poverty.

The failure to use available man power creates a tremendous economic and social loss not only to the individual laborers and their families but to their communities, the State, and Federal Government. Besides the waste of man power there is an added cost upon the community, State, and Nation in the form of relief and other assistance.

The community is less able to support an enlarged relief program because its taxing base is reduced. There is a commercial loss to the local merchants and professional groups due to the inadequate buying power of this large group. These and similar conditions are increasing the economic pressure which as yet has found no means of release from a situation in which an area of fertile agricultural land finds itself unable to support its resident farm population.

How to Meet the Challenge

What can be done to solve these problems?

How can the farm labor group be made more self-sufficient and less dependent upon intermittent work?

How can these problems be solved and yet not jeopardize the farm operators' chances of having available labor when needed?

These problems present a challenge to the community. They can be solved within the framework of democratic processes.

A solution satisfactory to all parties is probably not possible, however. The very nature of democratic processes involves compromises by various groups and individuals so that the general welfare may be served. It may become necessary to adjust present patterns or construct new patterns of economic relationships. The existing structure built up through haphazard accumulation during the expansion of cotton as a major crop, has indicated an inability to afford a satisfactory living to the farm group as a whole.

More equitable arrangements are needed between farm laborers and farm operators, and between the rural community and these less fortunate segments of its population. A democratic community approach to the problem would suggest a considerable variety of measures which might be undertaken locally. It would also suggest other measures to be undertaken with the assistance of responsible State and Federal agencies.

There is a real need for tolerant county planning committees democratically constituted so that sharecroppers and day laborers, as well as land owners and governmental units, will be represented. The problems of insecurity of the low income group can best be solved in an informal atmosphere so that the decisions and planning will be on truly democratic principles.

There is a real need for increasing the security of tenure of sharecroppers and of reducing the unstabilizing trend toward the substitution of day laborers for sharecroppers. Perhaps favorable answers to these needs can be furnished by landowners. The security of sharecroppers could be increased by agreements between sharecropper and landlord which provide the former with longer assured periods of land tenure than the customary 1-year period. Individual effort on the landlord's part would be of material assistance in reducing the trend of substituting day laborers for sharecroppers.

There is Need for Land Opportunities

There is a real need for a provision whereby at least some of the land-hungry sharecroppers and day laborers may have the opportunity of becoming owners of family-sized plots. A successful experiment in this direction is being conducted by the Farm Security Administration at LaForge, Mo., in New Madrid County. The development of ownership of family-sized units of good land, with favorable financing methods, warrants consideration of large landowners and local financial institutions.

There is a real need for an instrumentality for bringing together land operators who are seeking workers and farm laborers who are looking for work, thus conserving available work opportunities for local labor. To fill this need, the facilities of the United States Employment Service, cooperating with the Missouri State Employment Service, might well be recruited with the thought of providing an adequate farm labor placement service. While this agency cannot create jobs where none exist, it can eliminate the situation wherein farm operators recruit workers from other areas when the local labor supply is sufficient to meet the need. By informing farm laborers of all employment opportunities it can eliminate the expense to them of constantly seeking jobs.

There is a real need for adequate housing facilities for farm laborers during periods of slack employment when many are not housed on farms. The cooperation of the Federal Government could be sought to help in the solution of this problem. Such facilities should be located in areas accessible to work opportunities.

They should include a sufficient number of units so that sanitary and community facilities could be provided at a minimum cost and also so that servicing by the employment office could be most efficiently done. The farm labor placement service should be informed by farm operators of all employment opportunities in the area.

A Way to Increase Real Income

There is a real need for means whereby farm laborers can increase their real income through their own efforts, when work for pay is not available, by producing food, clothing, and other essentials for their home consumption. Adequate garden space could be made available by the farm operator to workers housed on individual farms; the necessary incentive for farming it could be provided by assuring the laborer of a tenure status which would enable him to harvest it. For other laborers adequate garden space could be provided by leasing or purchasing land for this purpose. This should be supplemented by providing seed, plowing, and supervision, including supervision of the canning of vegetables and fruit. A supplementary part of this program might well be the training of farm workers in handicraft work. Such training might conceivably aid them in improving home environment and, possibly, increasing the annual income through the sale of hand-produced articles.

There is a real need for further rehabilitation of the farm worker through programs resulting in more adequate medical care, greater participation in community affairs, increased educational advantages, and possibly vocational guidance. All of these, and more, could be woven into a well-rounded program which over a period of years would decrease greatly unrest from insecurity and increase the value of the farm laborer to his community.

The development of a comprehensive plan to deal with the complex social and economic problems can be accomplished best by the local communities in an attitude of determination that such problems shall be solved, with the technical and financial assistance of State and Federal agencies. Although the problems lie within the community, they are too great and too complex to be solved in their entirety by the farm operator and the farm laborer, acting independently. The cooperation of both, combined with that of other elements in the community, together with the State and Federal Governments, can provide the solutions.

78 Farmers Make a Map

by N. S. HADLEY

SEVENTY-EIGHT farmers of Parke County, Ind., have been drawing a map of their county. They started with memories of what it used to be. They took stock of their problems, resources, and opportunities. They "wanted to find out where they are before they attempt to determine where they are going." And they are winding up with a new experience in democratic processes and with conclusions that startle even themselves: That problems of tax delinquency, relief, erosion, declining fertility, and faulty management are linked with their finding that of 280,000 acres in this above-average Indiana county only 112,000 acres should remain in cropland use.

At the first meeting of 24 members of the county land-use planning committee, somebody started the ball rolling with the remark that he had driven through Jackson township the day before and was astonished by the changes he had noticed. He always thought it was pretty good land, he said. There were, about 20 years ago, two or three schools there. Roads were all right. People seemed to be getting along. Five or six families lived on that road, he recalled.

But, he continued, there has been a change—gradual enough, but astonishing when one had not visited the community in several years. Some fields were full of weeds. One school was closed. Roads had deteriorated. Pastures looked worn out. Erosion was increasing. Families had moved away. Buildings were run down.

What happened? Why?

He got no immediate answer. Somebody else was reminded that his son had remarked the same thing, that things appeared better when he was a boy. "I guess they just weren't good farmers there," he said.

Others joined the conversation: Pastures seemed greener a generation back. Erosion was becoming worse in one township. Many were on relief in another. Living standards and conditions were going down.

Inferior Soil—Depressed Communities

One farmer interjected the question, "Where is that?" A standard map was found, and the areas mentioned were pointed out. The depressed communities, they found, were in regions of inferior soil. There, too, tax delinquencies were concentrated or there were evidences of inefficient farm management, improper land use, inadequate finance, or insufficient acreage.

The next step followed logically. Work was started on a preliminary map after a discussion of possible rehabilitation, of the principles underlying effective soil use, some of the problems facing agriculture generally, the need for plans, the functions and coordination of agricultural agencies whose help was available, and utilization of local resources. J. B. Kohlmeyer of the land-use planning division of the Bureau of Agricultural Economics, Lafayette; J. C. Bottum of the Farm Management division of Purdue University, and the county agent worked with the committee whose members represented 10 of the 13 townships in the county.

The preliminary map indicated generally the location of various areas of the county according to these classifications:

Area A—Rough, poor land (submarginal for agricultural use).
Area B—Turkey Run State Park.
Area C—Rolling to rough; thin soil (marginal for cultivation).
Area D—None (land which should be brought into farm use).
Area E—All farm land:
a. Dark, level soil.
b. Level to rolling, light-colored soil.
c. Creek and river overflow land.
d. Sandy and gravelly soil (second bottom).
e. Muck.
f. Blow sand.

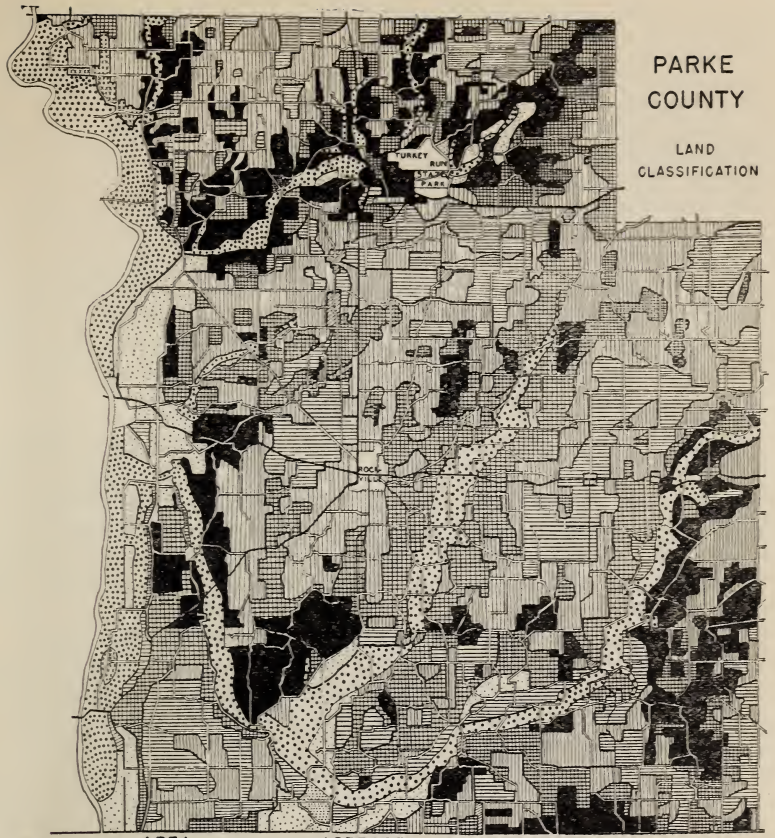
This was the result of a searching consideration of the soils in the county. Some particular area would be mentioned in a general way; there were differences of opinion as to the value of this or that field; it became apparent that impressions of the worth of certain areas were general, vague, or even incorrect. When one of the committeemen could not identify a piece of land exactly in terms of what the soil could grow, the problem was tabled for later consideration. The terms "good" or "bad" were eschewed in reference to land. The criterion was what the land would grow.

Rich Land, Poor Land of an Indiana County

That farm near Milligan, someone would remark, is of dark, level soil, productive, and adapted to a different kind of management than this or that farm, for example. With that as a norm for judging other localities, the committeemen marked comparable areas.

Southwest of Rockville there is a different kind of land, rolling, light, and subject to erosion if improperly handled, but satisfactory under careful management. As far as possible, the committeemen located similar areas in other parts of the county. The borders of creeks were checked and analyzed. Then came a discussion as to whether the hilly land should be devoted to woods or pastures. River and creek bottoms and the extent of muck were marked.

As the discussions, arguments, and map making progressed, there developed in the mind of each a realization of inexact knowledge of his own community, a growing appreciation for the importance of land



		AREA	ACREAGE	RECOMMENDED USE
A	■	ROUGH POOR LAND UNSUITED TO AGRICULTURAL USE PRIMARILY SUITED TO TIMBER PRODUCTION	51,000 OR 18%	TIMBER
C	▦	ROLLING TO ROUGH - THIN SOIL UNSUITED TO CULTIVATION PRIMARILY SUITED TO PASTURE	57,000 OR 20%	PASTURE
E_A	▤	LEVEL - DARK COLORED SOIL	44,000 OR 16%	85% CROP LAND CROP LAND USE - 30% CORN 30% SMALL GRAINS, 40% HAY & PASTURE
E_B	▥	LEVEL TO ROLLING - LIGHT COLORED SOIL	82,778 OR 30%	50% CROP LAND CROP LAND USE - 25% CORN 25% SMALL GRAINS, 50% HAY & PASTURE
E_C	⁘	OVERFLOW LAND	31,600 OR 11%	90% CROP LAND CROP LAND USE - 60% CORN 20% SMALL GRAINS, 20% GREEN MANURE & COVER CROPS
E_D	░	SANDY AND GRAVELLY SOILS - MOSTLY SECOND BOTTOMS	12,500 OR 4 1/2 %	80% CROP LAND CROP LAND USE - 25% CORN 25% SMALL GRAINS, 50% HAY & PASTURE
E_E	▥	MUCK SOILS	500 OR 1/6%	NO RECOMMENDATIONS
E_F	▦	BLOW SAND	1,000 OR 1/3%	NO RECOMMENDATIONS

PREPARED BY:
PARKE COUNTY
LAND USE PLANNING COMMITTEE

This is a corrected, combined map of Parke County, Ind., the product of 78 farmers and farm workers who "wanted to see where they were going" and who completed this step in county planning with a deeper understanding of their agricultural problems.

itself in his own life and his neighbors' and an understanding of the value of the work, for himself and those to follow.

"In my opinion," said the chairman, Willard Singleton, "the most valuable result that can come from land-use planning is to keep from wasting so much energy. Farming submarginal land wastes not only energy but farm resources. Most of our problems arise from the fact that the land is not used in the way Nature intended."

W. B. Guthrie seconded his remarks: "It is just sound business to use this land for what it is most efficient."

It was planned, too, to conduct meetings in each township of the county. These were set for the following month and the farmers attending had the duty of making detailed land-use maps for their respective communities, along with estimates regarding the present uses of the land and recommended uses of the land in each area.

Township Members Have an Eight-Hour Day

The township meetings were conducted in homes, schools, or churches. Ten of the sessions lasted all day, as much as 8 hours. Four to eight farmers attended each. Mr. Singleton was present to coordinate the work of the various committees. The county agricultural agent and his assistant attended to give secretarial and clerical help but avoided contributing to the conclusions. Three meetings were at night and lasted 3 hours each.

The procedure in the local township gatherings was like this:

A brief outline was given of what work was being done on a National and State scale. The wisdom of applying the various types of effort in their communities was discussed. A report of the county committee meeting was read and the broad land classifications were explained. Then, by using a form prepared in the county office, each land area was analyzed according to its extent in the township, the present use, and the recommended use. On plat maps, the entire area of the township was divided according to the various classifications as determined by the township committee. A wide variation of opinions was revealed, but in nearly all cases definite conclusions, satisfactory to all, were reached.

With colored crayons the committeemen went to work. Those sections that they found to be level and dark colored, they colored red; orange indicated level to rolling, light-colored soil; blue meant rolling to rough, thin soil; green showed creek and river bottom soil; black was for rough timberland.

For each category they filled in a duplicated form which listed nine points and read: (1) the soil fertility is being maintained on .... percent of this area; (2) the cropland in this area on which soil fertility is being maintained is being used as follows: .... percent corn, ... percent small grain, ... percent hay and pasture; (3) present use and rotation, recommended use and rotation; (4) need for limestone and the rate of application; (5) and (6) does this land respond to the use of phosphate and potash; (7) the most desirable family-size farm in this area; (8) summary of cropland use, 1936–37, taken from Soil Conservation files; (9) summary of land use as calculated from recommended rotation; .... percent corn, ... percent small grains, ... percent grasses.

More Than a Map is Produced

As the work progressed, its byproducts became more apparent. The task was an excellent means of education, the farmers discovered. It was a good approach to an accurate inventory of the resources and problems of the area; it provided factual information regarding the physical, economic, and social factors pertinent to the area; local people and the workers were becoming conscious of their opportunities and problems and the need for planning a course of action; they knew they were gathering information for various action agencies to help in coordinating and increasing the efficiency of their services.

The first drafts of the township maps were accurate enough. Farmers were frank in their appraisals of their own land, or their neighbors'. If a question arose or if information was scant and subject to question, visits were made later to the spot.

The township meetings completed, the county executive committee met to summarize the work of the township groups and write the report. The township maps were combined to make a county map.

That report had much of interest and importance in it. Parke County, the farmers found, could be divided into seven general areas with respect to soil types. Approximately 18 percent of the land was found to be submarginal for agricultural use. An additional 20 percent was discovered to be submarginal for cultivation. Of the remaining 62 percent, less than one-half should remain in cultivation. About 85,000 acres, or 30 percent of the county, was considered suited only for timber production, and 70,000 acres were adapted to the production of permanent pasture.

When the findings were all in, it was apparent that the concentration of tax delinquencies and relief in the poor-land areas added materially to local tax burdens and that 75,000 acres of woods pasture were neither good woods nor good pasture.

The map makers also found that additional information was needed on pasture improvement, the management of overflow land, and controlling creek and river channels. They found, as well, that much of the inefficient farm management and improper land use came as a result of inadequate finance.

One Task Is Ended, But the Work Goes On

What is to be done with the map now that it is nearly ready?

In the first place, the map showed the need for more information. A program was outlined in this connection—to locate the places of tax delinquencies, clients of the Farm Security Administration, the homes of school children and school bus routes, improved and unimproved roads, the assessed valuations of land, tenancy, participation in agricultural conservation, all direct Extension Service contacts (such as 4–H Club members, home economics club members, 5-acre Corn Club members, livestock breeders' association members, and project demonstrators), livestock distribution per farm by land-class areas and size of farms.

The report pointed out the need for an educational program regarding pastures, a forestry program, and different kinds of farm-management program in each area.

The preliminary map and report were completed in the spring of 1939. Meetings this winter have to do with trying to find answers to several questions on the basis of the map-making experience:

Should the county extension program be modified to apply to specific areas instead of a general program for the county as a whole?

Should the agricultural conservation program be modified with special features for the various areas?

In what areas should the Farm Security Administration operate?

How can the Soil Conservation Service be of greatest help in the solution of these problems?

Is this work of any value to the rural women of the county in the development of their program? Can the women of the county do something to help in the solution of these problems?

How can the size of the farm unit be enlarged?

How can the problem of inadequate finance be attacked?

The Women Start Their Own Survey of Home Life

One of those questions already has received a great deal of study. That has to do with the women's program. While their menfolk were making the maps, the women became interested in the project and started a comparable home-planning survey under the guidance of Miss Charlotte Etter, the county home demonstration agent, and two workers from the United States Department of Agriculture. The survey seeks information on a variety of topics.

These include tenancy, ownership, and stability; size of farm; the number in the family and their ages, the education of members of family, and health; the upkeep of house and grounds; the quantity and quality of furnishings, means of lighting and heating, bathroom; home equipment (washing machine, sewing machine, telephone, kind of stove, sink, refrigeration, sweeper, radio); food management; the amount of food purchased, home-produced and canned; clothing management;

time management (the amount of time devoted to farm activities and the responsibilities of other members of the family regarding household activities); education, the participation of the family in clubs; plans for the children to finish high school, college, or business college; leisure, recreation, informal social life; life, real estate, personal household, and farm insurance; net worth of family; statement of needs.

This is an ambitious program, but I am not alone in believing that it marks the dawning of a new day in Parke County. I was the county agricultural leader 4 years in Franklin County and another 4 years in Fulton County, but the making of the land-use map in Parke County has given me a clearer picture of the agricultural problems in the county than I ever had of the other two. This work is one of the most progressive steps ever made for Parke County agriculture.

How some of the committee members view the situation is shown in these remarks:

SAM DAVIS. The standard of living which we farmers want is one which will permit us to have the same physical comforts and educational standards as are demanded by urban people.

Mr. SINGLETON. We want to avoid having our wooded areas gutted and our relief burden multiplied by people who are thrown out of employment by industrial shut-downs. Any changes resulting from our studies will come voluntarily as a result of education. We are not an enforcement agency and do not believe in dictatorship. It will take 10 years before we see significant results from land-use planning.

Mr. GUTHRIE. Another thing that has grown out of this is that the proper use of land is tied up more with adequate size farm units than was commonly expected. There is some pride and confidence attached to this map that never would be attached to one made by professional workers. It is ours. We know how we made it, how much time we spent, and how sincerely and earnestly we worked. There are 78 of us here to defend it. It is a great step in making people more conscious of the use of land.

Maps, Soils, and Planning

by M. M. STRIKER

THESE things one may hold to be true: That the attainment of the "good" or "best" use of land is desired alike by the farmer and the research worker, that there seems to be a growing emphasis on a secure and more or less self-sustaining farm population, and that the fundamental adjustment is as much between the land and the people as between the people and their products.

And, therefore, the soil scientist will have an essential role in the development of both investigations and interpretations of land-use planning projects and data, on which are based special efforts by all branches of agricultural research to help develop policies looking toward soil conservation and the effective use of land in a system of permanent agriculture. This applies equally to farm and to community planning.

The soil scientist should aid in the study and recommendation of practices that may increase, restore, or maintain the productivity of the soil. He will need to make his suggestions for the most adequate and socially effective use of the land according to soil capabilities and in accordance with the other factors involving the use of land.

The "good" or "best" use of land usually depends upon many factors, or combinations of factors, rather than upon soil characteristics alone. To know that the soil is Miami loam or Hagerstown silt loam is not enough. Yet the soil is probably the most fundamental, most stable and most directly observable factor in agricultural production. Accurate information regarding the external and internal character of the soil is a prerequisite to research in land planning and to land planning itself.

Fortunately for the soil scientist and other students of agriculture, farmers, through trial-and-error, observation, and application, have developed rotations and systems of farming that reveal much about the potentialities of the land. Of course, there are instances in which poor homes, poor crops, soil erosion, and other visible symptoms of poor land use show that farmers have been unable to develop a suitable system of farming.

It is of first importance to study past and present cropping practices on the individual soil types and groups or associations of soil types. Once such observations (supplemented by experimental data gathered either by farmers or by technicians) are thus classified, the information may be used to characterize a particular natural landscape, and then can be carried to other persons living on similar soils, who may be able to come closer to adjustment with their own land resources.

Land Use Planning Under a Democratic System

Practically all farm planning in our country and much of the community planning will necessarily be done by the people on the land. Therefore, much of the experimentation, management, and financing must be handled by farmers, in cooperation with their neighbors and with governmental agencies, if a lasting program is to be realized. Better land use and management will come about, of course, through slow and evolutionary changes after agreement among farmers, community cooperators, technicians, and administrators. This goal of a socially more profitable and better use of land rests both, upon the desire and the ability of the people to keep the land in good condition as a necessary prerequisite to a system of permanent agriculture rather than in anticipation of large immediate material rewards. If a 10- to 25-year view is taken, in many places there is less conflict than is generally supposed between a system of agriculture involving conservation and effective use and a system that gives the greatest material return.

Most agricultural workers feel the need for soil information of varying detail in order properly to plan the use of land. Discussion during the last few years has been not so much on the importance of soil information as on the kind and detail of soil information necessary.

A careful examination of a modern detailed soil map reveals a maze of lines and figures that may be somewhat puzzling. Yet a thorough inspection makes evident to even the uninitiated the prevalence of areas with individual patterns of associated soils, either similar or very different. If one were to take the detailed soil map out to the field and walk with it along a fresh roadcut, by careful observation he could note a great number of soil variations that were not indicated separately on the map. Such a map showing all these variations would be impractical and technically impossible to make.

The value of land for cultivation often depends upon the distribution and pattern of soil types as much as it does upon the location of individual bodies of certain soil types. For example, one might think of a thousand acres of Miami silt loam having a B slope and moderately eroded all in one continuous single area or distributed in small tracts of 10 to 20 acres, in association with Brookston clay loam and Crosby clay loam. Productivity, workability, and "conservability" is considered in relation to cropping practices and tillage methods *by fields,* which sometimes can be modified to take into consideration soil type and phase influences. For planning purposes, both cartographic and categorical generalizations are essential, in order to arrange the detailed information in a way that can be understood clearly and can serve as a guide in developing broad divisions of land according to agricultural capabilities.

FIG. 1 - SAMPLE MAP OF SOIL TYPES AND GROUPS.

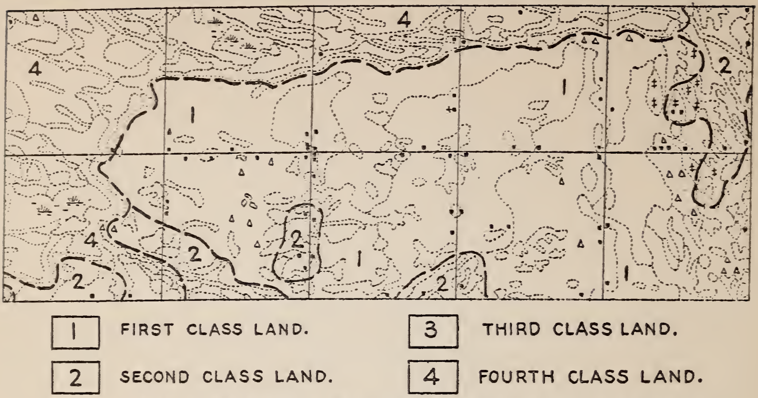
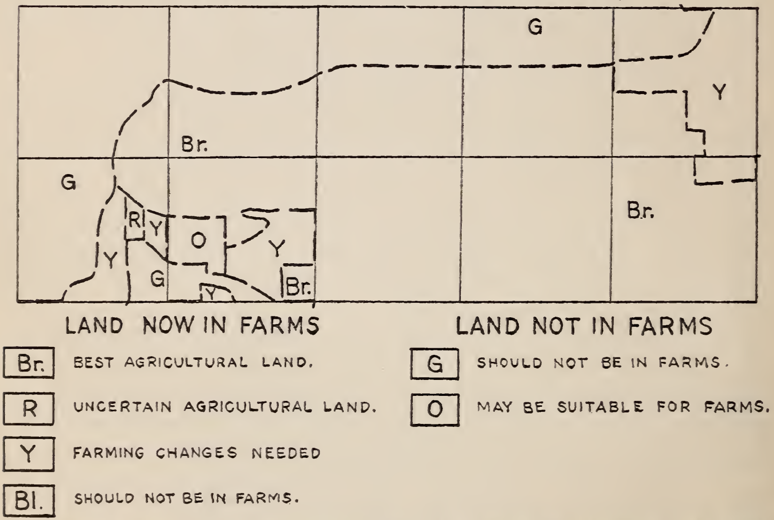


FIG. 2 - PRELIMINARY MAP OF LAND USE CLASSES.
(COUNTY AGRICULTURAL PLANNING COMMITTEE)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LAND NOW IN FARMS
LAND NOT IN FARMS
Br. BEST AGRICULTURAL LAND.
G SHOULD NOT BE IN FARMS.
R UNCERTAIN AGRICULTURAL LAND.
O MAY BE SUITABLE FOR FARMS.
Y FARMING CHANGES NEEDED
Bl. SHOULD NOT BE IN FARMS.

Figures 1 and 3 are reproductions of a modern detailed soil map. The heavy lines are boundaries of soil groups or broad, natural land classes developed by grouping soil types according to their dominant natural characteristics in relation to productivity and responses to management. Figure 1 is a map covering 10 square miles, in which the pattern of soil types is complex; these can be grouped to make a relatively simple map. Figure 3 represents an area of the same size. Here somewhat similar soil types make a different pattern and the same method of grouping results in a more detailed map. Corresponding

FIG. 3 - SAMPLE MAP OF SOIL TYPES AND GROUPS.

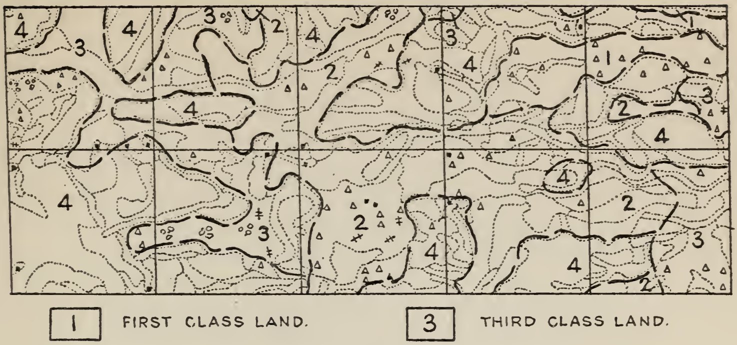
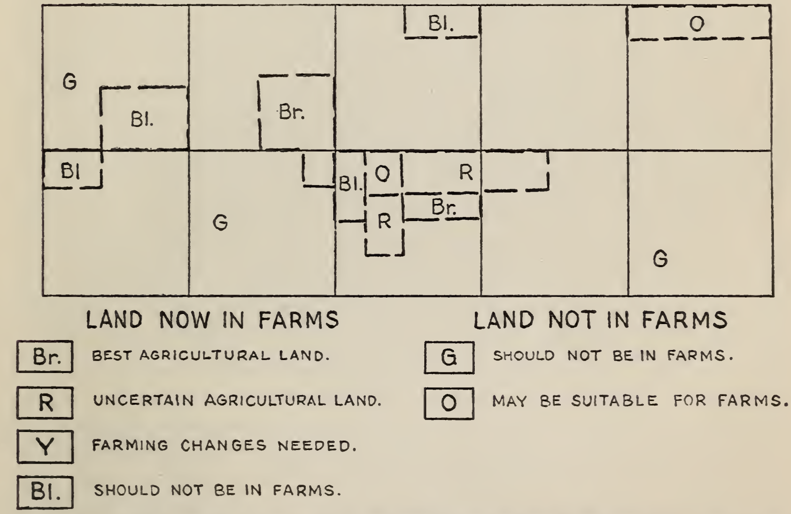


FIG. 4 - PRELIMINARY MAP OF LAND USE CLASSES.
(COUNTY AGRICULTURAL PLANNING COMMITTEE)


G
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LAND NOW IN FARMS
Br. BEST AGRICULTURAL LAND.
R UNCERTAIN AGRICULTURAL LAND.
Y FARMING CHANGES NEEDED.
Bl. SHOULD NOT BE IN FARMS.
LAND NOT IN FARMS
G SHOULD NOT BE IN FARMS.
O MAY BE SUITABLE FOR FARMS.

sections of the map drawn by a county agricultural planning committee are shown in figures 2 and 4.

The divisions in figure 2 generally coincide with the soil-group map above it. By using their experience and observations the farmers and local technicians have obtained a similar expression of land use capabilities. The divisions of figure 4 are, however, in marked contrast to the corresponding soil-group map. The undeveloped nature of this area has led to an inadequate portrayal of land-use capabilities as gathered and interpreted by farmers.

Soil Grouping or Land Classification in Midland County

In order to indicate the broad soil areas in Midland County, Mich., Gordon Johnsgard, now a fellow in soils at Cornell University, and the writer combined the 35 soil types into 4 main groups, each of which is made up of soils with somewhat similar internal and external characteristics, and showing similar productivity for the common crops. The grouping was based upon the texture, content of organic matter, and other characteristics of the soil profile and the external or surface drainage. Prof. G. O. Veatch of Michigan State College gave valuable help in developing the grouping.

These soil features are directly related to the productivity of the soils for the crops common to the county. Not only were the soils grouped into these four divisions, but sufficient cartographic generalization was made to reduce the scale of the map from 2 inches to about one-half inch per mile. Individual areas of less than 40 acres of one group were not separated from another group unless there was a considerable contrast between the two groups, as, for example, an area of first-class land within an area of third- or fourth-class land.

The soils of the first-class land are developed from parent materials of relatively heavy texture, have grayish-brown to nearly black plow soils, vary from loam to clay loam textures, and may have good, imperfect, or poor natural drainage. The soils considered as second-class are developed from a layer of material of intermediate texture over a heavy substratum lying at a depth ranging from 1 to 2 feet, have gray or dark-brown sandy loam surfaces and have imperfect or poor natural drainage.

The third-class soils are developed from deposits of sandy material over a clay substratum, at a depth ranging from 2 to 4 feet, have gray or grayish-brown plow soils, and a loamy sand texture. The natural drainage is imperfect or poor. The soils of the fourth-class land are developed from deposits of sand overlying clay at a depth of usually more than 4 feet. The natural drainage varies from good to poor.

County Planning and Maps of Soil Groups

Problem areas are shown in the sections of the county agricultural planning maps which represent the ideas of the local people as to present farming conditions and capabilities for use. If the map does not coincide exactly or in general with the maps of recommended systems of cropping and management practices, as prepared by soil scientists, agronomists, or economists, the reason may lie in the fact that the proposed divisions, as set up by these specialized workers, do not comprehend all the factors with which each farmer or groups of farmers must deal.

The farmer land planner consciously or unconsciously has taken account of many of these and other important features of land management, and has considered their integrated form rather than each factor individually. In figures 1 and 3 is shown a sample land classification, or perhaps more properly a soil-group map, of Midland County, developed by the soil-survey field party.

A comparison of this map, based largely upon the nature of the soils and productivity, with the land classification or problem area map developed by the county agricultural planning committee, shows the general areas to be similar in kind and location, despite the differences in definition for the two types of maps.

It will be noted that generally where the areas of excellent and good land are isolated or adjacent to areas of poor or fair land, the land classed by the technicians' map as good has been placed by the county committeemen in the poorer class of farm land. In other words, there is a practical, understandable tendency for the farmer to think in terms of farm units rather than small tracts of 40 acres or less. Unless the difference between good and poor cropland is marked by a very obvious soil boundary, the larger areas shown tend to encroach on the smaller areas. The land shown on the soil map as poor or fair is often rated better on the committee map as to productivity, especially if some farmers appear to have been successful in adapting their crops and practices of management to the soil conditions.

External Soil Features Are Fallible Guide

Since they are dealing with problems of existing conditions, the county committeemen also necessarily, perhaps, are guided a great deal by the present land use. This, however, may result in insufficient attention, from the soil scientist's view, being paid to the quality of soil in uncleared areas.

In attempting to coordinate all the factors involved, the committeemen have been forced to rely heavily on the external features of the landscape. The effect of this necessity may be failure to give the weight the technician would to each factor as they proceed from excellent to poor cropland. An example of a factor that might be improperly expressed is the adaptation of potatoes to sandy loam and loamy sand soil types. These soils have narrower or more limited adaptations to the common crops of the area. A system of farming and land management built around potatoes as a cash crop would certainly minimize this limitation.

New crops or new management practices on soil types of limited adaptation would tend also to equalize these differences.

In some places in Midland County the light-textured soils were included with the fair to good cropland, and in other places the same soils were included with the very poor land. This was because no great importance was attached to the relationship of the productivity of the soils to the depth of the sandy surface horizons over clay. Soils having sandy surface horizons underlain by clay, at a depth ranging from 1 to 3 feet below the surface, are rated on the soil map as fair or good, whereas somewhat similar soils having the clay below a depth of 4 feet are considered poor for cropping purposes.

Many of these relationships are being brought to light as the farmers and technicians compare the results of their work, and as the farmer finds it possible to take the latter's findings into account. Figures 1 to 4 furnish a comparison of the county agricultural planning map and soil-group map.

Naturally, the question arises as to the possible relationships of soils, their distribution and characteristics, to the farmer's present choice of crops and methods. The theoretically ideal relationship between soils and cropping practices is often complicated by the farmers' personal preferences among many possible enterprises, market facilities, and other economic and social factors.

In Midland County many of the factors that might seriously influence this crop-soil relation could vary only within relatively very narrow limits. Market facilities and possible crop choices are reasonably similar throughout the county. Then, too, the general smoothness of the land, relative freedom from accelerated erosion and stone, and similarity of drainage possibilities allow attention to be directed primarily to the internal characteristics of the soil types.

The Agronomic Significance of the Land Classes

In order to study the agronomic significances of the four classes of agricultural land, the county agricultural agent, Charles Crapser, and the author selected 40 owner-operated farms, well distributed over the county, with 10 farms in each of the 4 groups. None of the farms included more than a few acres of cropland, and most of them less than 10 acres of any other land class, although a part of the farm not devoted to crops might have a relatively wide variation as to class.

By selecting owner-operated farms and placing restrictions on only the cropland portion of the farm unit, a more distinct relationship could be obtained and one that would be expected to represent better-than-average farm management. The objective was to see if the classification, based on natural soil groups and productivity, did materially influence and coincide with the farmers' cropping methods and management practices.

The local office of the Agricultural Adjustment Administration furnished the necessary crop records for the years 1935–38. The acreages reflected the crop base from 1924–34 and the variations allowed the farmer under the program since 1935. A plat was drawn for each farm, with the field number and kind of crop indicated in each field for each of the 4 years. The crops recorded were tame hay, tame or rotation pasture, corn, oats, beans, barley, wheat, sugar beets, potatoes, and miscellaneous or other crops.

The average size of each farm is practically identical on all classes of land. The fraction of the farm unit in cropland is about two-thirds in the first two classes of land, and drops to two-fifths and one-third, respectively, in the third and fourth classes. From one-half to two-thirds of the noncropped portion is of the same or better quality than the present cropland in the first three classes. Roads, driveways, farmsteads, gardens, orchards, and other uses account for 5 to 10 acres of the noncrop portion of each farm. These farmers apparently desire to have wood lots, stump pasture, and permanent pasture as a part of the farm unit, regardless of the likely more intensive use of cropping.

Soil Conditions Influence Farm Practices

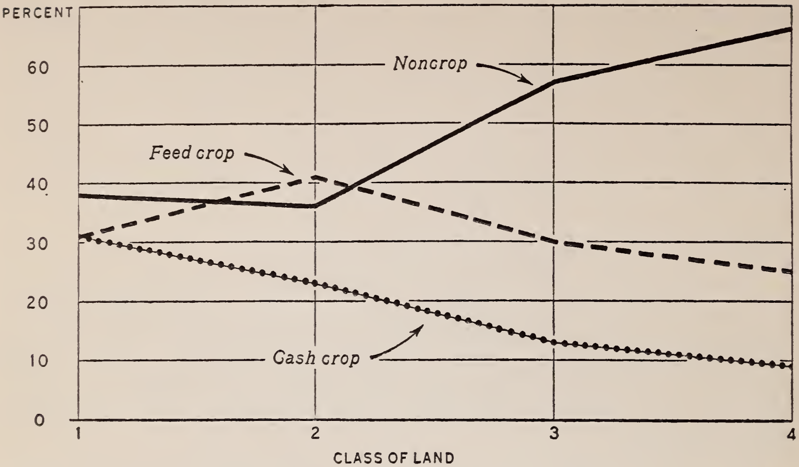
The shift in the percentage of the total cropland devoted to each crop as one proceeds from the first- to the fourth-class land illustrates the farmer's inclination to adapt his practices to soil conditions, in order to maintain fertility, and to have a more "profitable" use. Field beans yield about 20 bushels an acre on first-class land; 15 bushels on second-class land; 10 bushels on third-class land; and from 5 to 8 bushels on fourth-class land.

Other crops follow the same general trend under this selected management, with the exception of potatoes, which yield somewhat similarly on land of the first three classes. Potatoes of the best quality, however, are grown on land of the second or the third class. The increased acreage of hay on the second- and third-class lands does not offset the higher yields on the first-class land in terms of total production per farm.

In order to arrive at the real significance of the differences in the farmer's practices on the different classes of land, the crops were grouped into cash and feed crops. The acreage devoted to each of these uses is shown in the accompanying graph.

The shift from cash to feed crops between classes of land shows rather clearly that the type of farming in this county is closely related to land classes, as determined mainly by soil character and productivity. On the first-class land, practically equal areas in the farm unit are devoted to cash crops and feed crops, while on the second-class land there is a larger proportion of feed crops and other soil-conserving or semisoil-conserving crops, with a corresponding reduction in cash crops.

The farmer has found that he must devote more acres to hay and pasture in the rotation and less to beets, beans, wheat, and barley, if soil productivity is to be maintained. Farmers on the third-class land find even longer rotations desirable, with a larger percentage of hay crops and permanent pasture playing a more important part. On land of this class, beans and potatoes are the main cash crop, and most of the other crops are used mainly for feed. More than two-thirds of the crop proportion of the farms is devoted to growing feed crops. The


PERCENTAGE OF AVERAGE FARM UNIT ON EACH LAND CLASS DEVOTED TO CASH, FEED, AND NONCROP USES

fourth class merely shows more limited use possibilities insofar as the common crops are concerned.

The first-class farms might be designated as general cash-crop and livestock farms; the second, as livestock farms with limited cash crops; the third, as livestock, cash-crop, and subsistence farms; and the fourth, as subsistence and livestock farms. Assuming a certain amount of fair, good, or excellent cropland as necessary to maintain a farm family with ordinary living comforts and income, it would seem that the marginal line under present types of farming is between the second and third classes of land, while the submarginal line is between the third and fourth classes.

Differences in Sizes, Crops, and Rotations

These investigations also show marked differences between the various classes of land, as to the size, shape, and number of fields, the selection of crops for particular soil types, and the irregularity and length of rotations.

Practices recommended for the improvement and maintenance of soil fertility and for more effective use would need to be based mainly upon the soil-crop relationships, as the experience of the farmers has already demonstrated. Experimentation and research by either farmers or technicians are oriented to the soil type and groups and can be used as a basis for planned testing of farm practices under actual field conditions. These data of cropping use and management can be better interpreted, classified, and applied to these or similar cases.

The close relationship between these soil groups, or land classes, and the kind, distribution, and acreage of crops would indicate the importance of the use of the soil map as a basis for a better understanding of present and future land problems. The soil data, backed by the experience of the farmers, form a satisfactory basis for planning changed uses of poor lands and the bringing into production of the better lands that are now uncleared in Midland County. It is doubtful if either the farmer or planning technician has sufficient information definitely to shift the land use and land management or predict the land-use capabilities in marginal areas where the land problems are usually most important. The use of improved farming techniques or new crops might upset the best laid plans, and these last two conditions are just beginning to be tested under actual farming conditions, where population pressure on the land is a distinct problem.

Such a classification map, based on soil types or groups of soil types and their responses to management, certainly will have much to contribute toward a more comprehensive land classification that would take into account the total experience of farmers and the total contribution of the technicians.

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The Migrants

Data for this article, the third of a series concerning problems created by migration into the Pacific Coast States, were obtained from a questionnaire submitted to school children of families who had moved into Washington, Oregon, and Idaho since 1929. Somewhat more than three-fourths of the public schools in the three States cooperated in the survey, a part of a comprehensive investigation by several agencies under the leadership of the Bureau of Agricultural Economics and the Farm Security Administration, Region XI.

III. Migration to the Pacific Northwest, 1930-1938

by WILLARD W. TROXELL and W. PAUL O'DAY

MIGRATION built the Northwest. Each year since the time of the pioneers the Northwest has attracted many ambitious Americans seeking to better their condition.

Most have stayed to establish new homes. Others have drifted on. The result has been a continuous and rapid increase of population. In 1930 only 44 percent of the inhabitants of the Northwest had been born in the region.[1]

Exact measures of past migrations do not exist; they can only be inferred from census data. Estimates have been made which indicate that approximately 640,000 persons who were living in Oregon, Washington, and Idaho in 1930 had moved into their respective states during the preceding decade, and about 440,000 of these had come into the Northwest from other areas.[2] Approximately 290,000 of the persons who were living in the Northwest in 1920 moved out during the decade; hence the *net* gain from migration was about 150,000. From 1900 to

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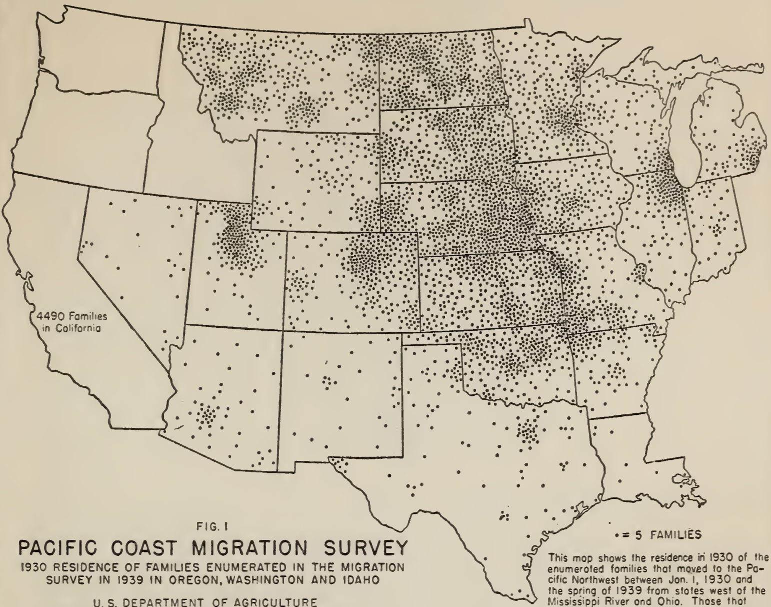
[1] *The Northwest refers herein to Oregon, Washington, and Idaho.*

[2] *These estimates will be part of a forthcoming final report of this study. The authors wish to acknowledge the cooperation of George B. Herington, Labor Relations Representative, FSA, Region XI, in this study. They involve the basic assumption that the outward stream of migration from a State is composed of natives and nonnatives of the State in the same proportions as in the resident population of the State. The calculated net migration is approximately the same, State by State, as that given in Preliminary Analysis of Population Data, Pacific Northwest States, by James E. Maxwell, Pacific Northwest Regional Planning Commission, Portland, Oreg. Migration estimates for Oregon are also given in Migration into Oregon, 1930–1937, by V. B. Stanbery, Oregon State Planning Board.*



This map shows the residence in 1930 of the enumerated families that moved to the Pacific Northwest between Jan. 1, 1930 and the spring of 1939 from states west of the Mississippi River and Ohio. Those that were living in Pacific Coast States in 1930 are omitted. The families shown include approximately 57% of the total number enumerated.

FIG. I
PACIFIC COAST MIGRATION SURVEY
1930 RESIDENCE OF FAMILIES ENUMERATED IN THE MIGRATION SURVEY IN 1939 IN OREGON, WASHINGTON AND IDAHO

U. S. DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ECONOMICS
AND
FARM SECURITY ADMINISTRATION

1910, when the lumber industry of the Northwest was developing rapidly, the net gain was much larger than in 1920–30.[3]

Regarding the number of persons who moved into the Northwest during the 1930's, no census information is available, but the present migration survey data provide a basis for a rough estimate. The survey enumerated 45,211 families but did not reach everybody eligible for inclusion. It has been estimated that the enumerated families represent approximately 63 percent of all that were eligible for inclusion; hence it appears probable that there were in the Northwest in the spring of 1939 some 72,000 families that entered their States after 1929 and had children in the public schools at the time of the survey.

Besides, there were unknown numbers of unattached single persons and families without school children. It seems reasonable to assume that the proportion of school children in the migrant group is about the same as in the population of the areas from which these people came. On this basis, it is estimated that approximately 620,000 persons moved into Washington, Idaho, and Oregon after 1929 and were still living there in the spring of 1939.[4] This figure does not, of course, represent net population increase, since births, deaths, and departures from these States are not taken into account. One-quarter of the families enumerated were living in Oregon, Washington, and Idaho in January 1930 (table 1). The probable addition to the 1939 population of these States due to inward migration from outside the area after 1929 was, therefore, roughly three-quarters of 620,000, or about 460,000 persons. This is about 16 percent of the 1930 population. The number moving out of the Northwest in this period is not known.

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[3] *Internal Migration in the United States, by C. W. Thornthwaite, University of Pennsylvania Press, 1934.*

The calculated migration—460,000 persons—into the Northwest in the period of a little more than 9 years from 1930 to early 1939 is very little more than the 440,000 estimated as moving into the area in the 10-year period 1920 to 1930. These estimates are to be considered as rough measures only, but they indicate that the movement was of approximately the same magnitude in the 1930's as during the preceding decade.

Sources of the Migration

An outstanding fact revealed by the residence data is the large movement from State to State within the Northwest. One-quarter of the enumerated families were living in the Northwest in 1930 and subsequently moved to other States in the area, or out and back again to the same State (table 1). The interchanges of population between these three States resulted in gains for Washington and Oregon at the expense of Idaho. There was also a large interchange between California and the Northwest. More of the families studied came from California than from any other State. Preliminary samples of the migration survey and the border count in California show large numbers moving southward from Oregon and Washington.[5]

Next to the Pacific Coast region the Great Plains States were the principal sources of migration. The Pacific Northwest has drawn large numbers from the northern part of the Plains, but relatively few from the southern part. This is in marked contrast to the situation in California, where Oklahoma and Texas were the most important sources.

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[4] *There are approximately 4.7 persons, on the average, to each child enrolled in public schools in the areas which contributed most heavily to the Northwest migration. It is calculated that the 72,000 families eligible for inclusion in the survey contained about 131,000 school children, hence the total group that migrated would be approximately 4.7 x 131,000, or 620,000 persons.*

[5] *"Recent Migration to the Pacific Coast," by Davis McEntire and N. L. Whetten. Land Policy Review, September-October 1939.*

TABLE 1.—*Families enumerated in the Northwest migration survey, by regions and States of residence in January 1930*

Region and State of residence in January 1930	Residence in 1939				
	Total, 3 States		Washington	Oregon	Idaho
	Number	*Percent*	*Number*	*Number*	*Number*
All cases	45,211	....	18,997	19,421	6,793
Residence known	42,049	100.0	18,304	17,178	6,567
Northwestern States	10,607	25.2	4,727	4,327	1,553
Washington	4,267	10.1	762	2,729	776
Oregon	3,493	8.3	2,473	582	438
Idaho	2,847	6.8	1,492	1,016	339
California	4,490	10.7	1,777	2,360	353
Southwestern States	1,458	3.5	297	418	743
Utah	1,042	2.5	173	214	655
Arizona	300	.7	94	155	51
Nevada	116	.3	30	49	37
Northern Great Plains	10,543	25.0	4,744	3,909	1,890
Nebraska	2,954	7.0	896	1,354	704
North Dakota	2,411	5.7	1,354	825	232
Montana	2,299	5.5	1,293	568	438
South Dakota	2,146	5.1	946	926	274
Wyoming	733	1.7	255	236	242
Southern Great Plains	5,810	13.8	2,073	2,709	1,028
Kansas	2,096	5.0	728	961	407
Colorado	1,630	3.9	583	725	322
Oklahoma	1,369	3.2	505	666	198
Texas	551	1.3	207	268	76
New Mexico	164	.4	50	89	25
North Central States	5,960	14.2	2,898	2,372	690
Minnesota	1,332	3.2	729	518	85
Missouri	1,248	3.0	533	435	280
Iowa	1,112	2.6	465	498	149
Illinois	695	1.6	345	281	69
Wisconsin	607	1.4	334	245	28
Michigan	490	1.2	264	185	41
Ohio	240	.6	121	100	19
Indiana	236	.6	107	110	19
South Central States	575	1.4	241	226	108
Arkansas	479	1.2	198	181	100
Louisiana	51	.1	22	25	4
Mississippi	45	.1	21	20	4
Southeastern States [a]	508	1.2	296	152	60
Northeastern States [b]	760	1.8	392	315	53
Overseas and foreign countries	1,338	3.2	859	390	89
Unknown	3,162	....	693	2,243	226

[a] *Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Kentucky, Tennessee.*

[b] *New England States, New York, Pennsylvania, New Jersey, Delaware, Maryland, District of Columbia, West Virginia.*

An overwhelming majority of the migrant Oklahomans went to California, and there appears to be a strong tendency for migrants from the Northern Plains to move straight westward.

The map (fig. 1) shows the 1930 residence of the enumerated families who lived west of the Mississippi River and Ohio. It indicates large numbers in Nebraska, the Dakotas, and Montana, and more strikingly, concentrations around the large cities. Clusters of dots mark the Salt Lake area, Denver, Omaha, Minneapolis and St. Paul, Duluth, Chicago, and Detroit.

In general, the Northwest States drew larger numbers from nearby States than from more distant ones. Less than one-tenth of the total came from east of the Mississippi River. Foreign countries were not an important source of migration, although there were many Canadians in the group.

An analysis of the residential shifts that took place after 1930 shows that between two-thirds and three-quarters of the enumerated families moved directly to the States where they were living in 1939. The others made one or more intermediate moves in various directions, with some tendency to concentrate in the States close to their final destinations. A few families moved into California before going to the Northwest, but the evidence does not support the idea that the inflow into the Northwest has been in large part the backwash of a heavy California-bound movement.

Periods of the Migration

The movement to the Northwest reached a peak in 1936 and 1937, as is indicated by the graph in figure 2. More of the families enumerated in Washington arrived in 1937 than in any other year, while for Oregon and Idaho the peak year was 1936 (table 2). In all three States there was a sharp reduction in the incoming movement in 1938. Large volume in 1936 and 1937 followed by a sharp reduction in 1938 characterized the entire westward migration, the movement into California showing the same features.[6] The droughts of 1934 and 1936 followed by a return to normal rainfall in the Plains were probably the underlying cause, but the movement was not limited to farm families.

There was a marked difference between the timing of the migration from the Pacific Coast States and other sources. The graphs in figure 2 show a fairly steady upward trend from 1930 to 1938 for arrivals from the Pacific States, while the numbers coming from other areas were much greater in 1936 and 1937 than in other years. The steady rise of the curve for the Pacific Coast States should not, however, be considered to measure a steadily increasing *inflow,* because the numbers cover only families that were still in the State in 1939 and take no account of those who moved both in and out in the period. This residue of the inflow is likely to be relatively less for the arrivals of earlier years because of the greater time available for depletion of the ranks of the earlier arrivals. Furthermore, it is likely that there has been an under-enumeration of the earlier arrivals because many of their younger children were born in the State that they were living in at the time of the survey, and for that reason may not have responded.

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[6] *McEntire and Whetten. op. cit.*

TABLE 2.—*Families enumerated in the Northwest migration survey, by year of arrival in the States of 1939 residence*

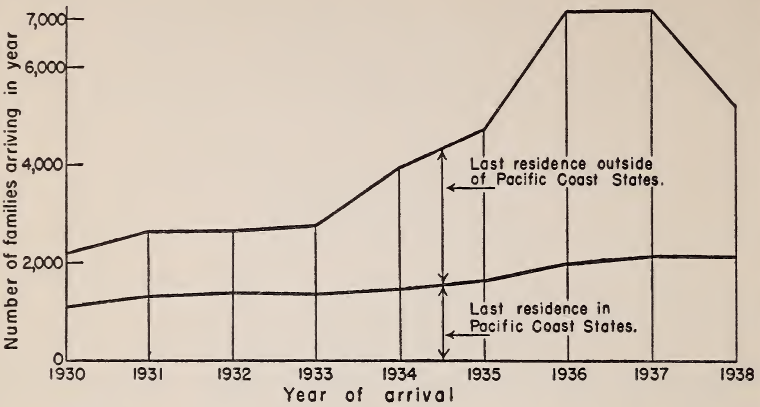
Year of arrival	Total, 3 States		Washington	Oregon	Idaho
	Number	*Percent*	*Number*	*Number*	*Number*
All years	45, 211	100. 0	18, 997	19, 421	6, 793
1930	2, 346	5. 2	1, 069	908	369
1931	2, 844	6. 3	1, 219	1, 170	455
1932	2, 935	6. 5	1, 226	1, 249	460
1933	3, 053	6. 7	1, 314	1, 292	447
1934	4, 382	9. 7	1, 829	1, 859	694
1935	5, 337	11. 8	2, 141	2, 335	861
1936	8, 088	17. 9	3, 250	3, 615	1, 223
1937	8, 167	18. 1	3, 550	3, 528	1, 089
1938	6, 389	14. 1	2, 677	2, 804	908
1939 [a]	1, 075	2. 4	498	393	184
Unknown	595	1. 3	224	268	103

[a] *First 4 months.*

The actual inflow from the Pacific States was probably much more nearly constant from year to year than the data indicate, but there was undoubtedly a sharp rise from 1933 to 1936 in the migration from other areas, especially the Great Plains.

From this evidence, the migration appears to have had three distinct phases. During the first phase, from 1930 through 1933, approximately half of the incoming people came from the Pacific Coast States. The years from 1934 to 1937 were characterized by a rapidly increasing movement from the Plains States, bringing in relatively large numbers of agricultural workers. This is the drought phase. The data for the year 1938 show signs of a return to the characteristics of the pre-1934 migration.

Fig. 2. Families enumerated in Northwest Migration Survey, by year of arrival in state of 1939 residence.



The upper graph shows all families whose last residence was known; the lower graph shows families whose last residence was known to be in Pacific Coast States (Washington, Oregon, Idaho, California).

Areas of Settlement

In general, the most populous areas attracted the most newcomers. The areas of greatest concentration were Portland and the Willamette Valley, the Puget Sound region, the Yakima Valley, Spokane, the Snake River Valley, and the northern counties of Idaho. The 10 leading counties, ranked according to number of enumerated families, are Multnomah, Oreg. (Portland); King, Wash. (Seattle); Spokane, Wash.; Yakima, Wash.; Pierce, Wash. (Tacoma); Marion, Oreg. (Salem); Lane, Oreg. (Eugene); Snohomish, Wash. (Everett); Clackamas, Oreg.; Jackson, Oreg. (Medford).

In these 10 counties were 43 percent of the enumerated cases, and 50 percent of the population of the three States. The part of Washington and Oregon lying west of the Cascade Mountains included 59 percent of the survey families and 63 percent of the population.

While the geographical distribution of the newcomers is generally similar to that of the resident population, there are some differences. The impact of the migration, as measured by the ratio of newcomers to resident population, was somewhat greater in the rural areas and small cities than in the large cities. Table 3 shows the distribution of the enumerated families and the 1930 population by size of community.

Because the residence classification of the survey cases was on a school district basis and the urban districts usually included areas outside the corporate limits of the city, the numbers classified as living in the cities are somewhat inflated. The percentage distributions shown in table 3 are, therefore, not strictly comparable, but they do serve to indicate that the ratio of newcomers to resident population was lower in the large cities and higher in rural areas and small cities.

TABLE 3.—*Families enumerated in the Northwest migration survey and percentage distribution of the 1930 population, by residence classification* [a]

Residence classification	1930 population	Families enumerated in migration survey				
		Total		Washington	Oregon	Idaho
	Percent	*Number*	*Percent*	*Number*	*Number*	*Number*
Total	100.0	45,211	100.0	18,997	19,421	6,793
Cities over 100,000	30.0	8,032	17.8	3,911	4,121	....
Portland	10.2	4,121	9.1	....	4,121	....
Seattle [b]	12.3	1,491	3.3	1,491	....	....
Spokane	3.9	1,443	3.2	1,443	....	....
Tacoma	3.6	977	2.2	977	....	....
Cities 10,000 to 100,000	11.0	6,339	14.0	3,382	1,988	969
Cities 2,500 to 10,000	9.8	7,873	17.4	2,289	2,921	2,663
Rural areas	49.2	22,967	50.8	9,415	10,391	3,161

[a] *Residence classification was based on the school district attended by the youngest child in the family. The school districts were classified according to the 1930 population of the largest city in the district. Those containing no city over 2,500 population are rural.*

[b] *Because of a difference in the method of conducting the survey in Seattle, the enumeration there was less complete than in most other areas.*

Occupational Groups and Occupational Shifts

Nearly all occupations from unskilled labor to the most highly trained professions were represented in the group studied.[7] In fact, this group appears to have been made up of a fair cross section of the occupational classes of the areas from which these people came. This is shown in the bar charts of figure 3a, in which the occupational group distributions

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[7] *"Former occupations" were classified from the children's replies to the question, "What kind of work did (your father) do before he came to Washington (Oregon, Idaho)?" "1939 occupations" were classified from replies to the question, "What kind of work does your father do right now?" Occupational group classifications were based on Alba M. Edwards' "A Social-Economic Grouping of the Gainful Workers of the United States—1930." Grouping of census data was taken from this publication. Farmers and farm laborers have been grouped together because the children's replies were not specific enough to separate them.*

Fig. 3a — Percentage distribution of male heads of enumerated families by former occupational groups by regions of last residence; and comparison with distribution of all gainfully occupied males in those regions according to 1930 census.

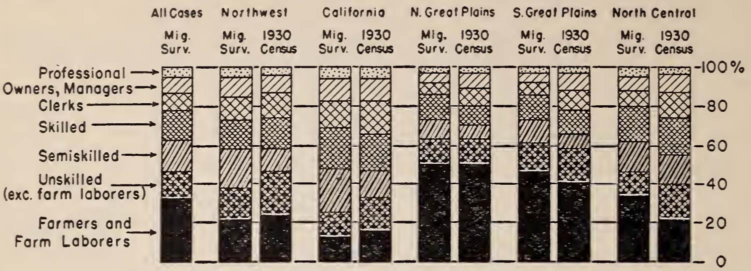


Fig. 3b — Male heads of enumerated families, by 1939 occupational groups and former occupational groups.

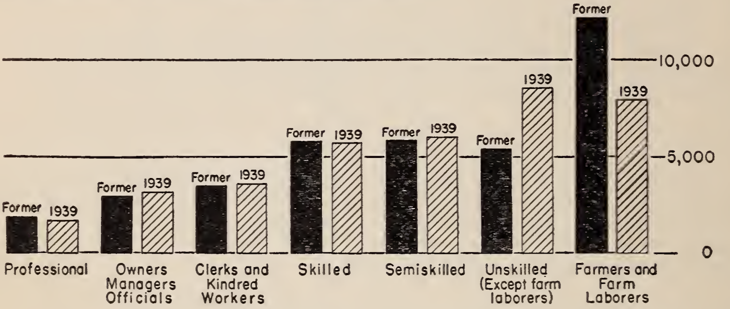
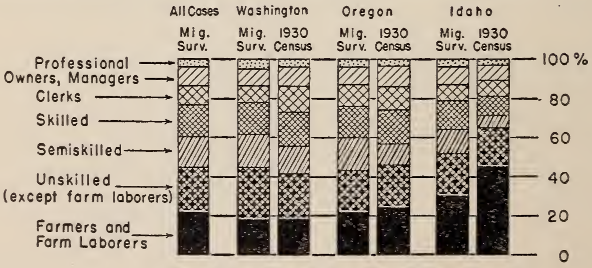


Fig. 3c — Percentage distribution of employed male heads of enumerated families by 1939 occupational groups, by state of residence in 1939; and comparison with distribution of all gainfully occupied males according to 1930 census.



of the survey cases from five regions are compared with the distributions of the gainfully employed male population of those regions.

The children of 12,142 families reported that their fathers had been engaged in farm work before coming into the State. This was about one-third of the cases for which the previous occupation of the father was reported. For the groups from the Northwest States, California, and the Northern Plains the proportion of agricultural workers (farmers and farm laborers) was very nearly the same as the proportion of such workers in the male working population of those areas (figure 3a).

In the groups from the Southern Plains and the North Central States the proportion of farmers and farm laborers was somewhat greater than in the resident populations. The migration from the latter region was largely from the agricultural areas of Minnesota, Iowa, and Missouri.

Among the nonagricultural occupations the white-collar classes were somewhat under-represented in the survey group, while manual workers, especially the semi-skilled class, were somewhat overrepresented.

There is also a marked similarity in the grouping of the occupations pursued in 1939 by the employed heads of the enumerated families and that of the male population of the Northwest States as indicated by the 1930 census (figure 3c).

This is about what one would expect, since the opportunities for the employment of newcomers in most types of work are likely to be roughly proportional to the numbers already employed in such work. The similarity is not so close for the Idaho cases as for Washington and Oregon. In Idaho the agricultural group was unduly small, probably because a significant proportion of rural schools did not cooperate in the study.

The process of adaptation of the newcomers to the occupational demands of their new environment involved a considerable amount of shifting from one occupation to another. The number working in agriculture in 1939 was considerably less than the number reported to have been working at it before coming into the State (figure 3b).[8] The unskilled labor group, in which W. P. A. was an important source of employment after the migration, was larger in 1939 than before the migration.

It is not to be concluded from this, however, that all of the members of these groups were able to find employment at their usual occupations. There was a great deal of shifting about between all groups, the greatest amount taking place between the unskilled labor and farm groups.

In reply to the question, "What kind of work is your father doing right now?" some of the children reported their fathers to be on W. P. A. or as "not working." The "not working" replies cannot be used as a measure of unemployment for the group as a whole, since a direct question on unemployment was not asked and an indication of the length of period of unemployment is required for an appraisal. Also, it is probable that some children whose fathers were working on W. P. A. jobs failed to note the fact, because they were not asked directly whether he was on W. P. A. However, a sufficient number of these replies were received to warrant some internal comparisons, and it is probably safe to regard the number reported on W. P. A. as a minimum figure.

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[8] *In this connection, it should be remembered that the survey was made when the demand for agricultural labor in the Northwest was at a seasonal low. This does not, however, affect the comparison with 1930 census data, which were also collected in the spring.*

Of the heads of families enumerated, 2,659 were reported to be not working when the survey was made and 3,502 were on W. P. A. These two groups make up about 14 percent of the total cases. Former unskilled and agricultural workers were the two groups that contributed most, both absolutely and relatively, to the W. P. A. and unemployed classes (table 4). About 18 percent of the agricultural group and 25 percent of the unskilled, as compared to 10 percent of the other groups, were reported to be on W. P. A. or unemployed in 1939.

TABLE 4.—*Male heads of families enumerated in the Northwest migration survey who were unemployed or on W. P. A. in 1939, by former occupational groups*

Former occupational group	W. P. A.		Unemployed	
	Number	Percent of occupational group	Number	Percent of occupational group
All groups	3, 502	8. 1	2, 659	6. 2
Professionals	25	1. 4	44	2. 4
Owners, managers, officials	66	2. 2	120	4. 1
Clerks and kindred workers	99	2. 9	121	3. 5
Skilled workers and foremen	367	6. 4	325	5. 6
Semiskilled workers	464	8. 0	343	5. 9
Unskilled workers (except farm laborers)	805	15. 0	538	10. 0
Farmers and farm laborers	1, 313	10. 8	890	7. 3
Unknown	363	6. 1	278	4. 7

A break-down of the unemployed cases by year of arrival in the State shows a slightly higher proportion among the 1934 to 1938 arrivals than earlier groups. This is a reflection of the greater number of agricultural workers arriving in these years. The 1938 arrivals had the highest proportion unemployed in 1939, but only a few of these latecomers were on W. P. A., probably because of residence requirements affecting eligibility for certification.

As measured by the proportion unemployed and on W. P. A., the unskilled labor and agricultural groups appear to have been the least successful in establishing themselves in their new economic environment. Public policies for relieving distress and aiding in the absorption of newcomers into the economic life of the community should, therefore, be directed largely toward the needs of these groups.

The trek to the Northwest in recent years is a continuation of an historic movement. It is not a new phenomenon, nor an old one greatly intensified. But the circumstances surrounding it have forced it on public attention. The facts suggest that possibly the solution of present difficulties will be found to lie not in a diminution of the incoming stream of people, but in the further development of resources and new opportunities for employment.

COMMUNICATIONS

Sir:

As the Water Facilities Program goes into its second winter, I should like to direct the attention of readers of the Land Policy Review to the accomplishments of the program in its first full year of operations. This will follow up an article entitled "Water for the West" in volume I, No. 3 of the Review.

On the map of the United States a great rectangle, bounded by a line from North Dakota to Washington State to California to Texas and back to North Dakota, is being spotted with new Water Facilities areas. Policies and procedures have been worked out, matured and modified with experience; areas have been selected and many of them already carefully planned. Now the actual installation of various types of water facilities is gaining momentum.

As of November 1, 1939, 56 areas had been authorized for both planning and operations, comprising 147,000 square miles in all 17 arid and semiarid Western States; 76 additional areas had been authorized for planning, involving 84,000 square miles covering parts of all 17 States; 116 counties, in 15 of the States, had been selected for the installation of demonstrational facilities; 185 separate projects had been completed, including 89 Stock watering projects, 90 Irrigation, 6 other; 580 projects had been authorized in all, benefiting 887 families and including 219 Stock watering projects, 292 Irrigation, 69 other.

Of the Government's direct cost for these 580 projects, 92 percent is expected to be repaid. For 141 of them, farmers are to receive technical assistance only in building their facilities without public financial aid.

Covering 60 percent of the Nation's area, the 17 Western States normally receive less than 42 percent of the total precipitation. Much of this falls in places (on mountain tops) or under circumstances (in cloudbursts) which enter it not immediately available for agriculture.

In this land of extremes and variations, dripping mountains overlook arid plains; flood waters carry away soil long pulverized by drought. In the words of the President's Great Plains Committee, "The best that can be done is to regulate the varying supply [of water] at our disposal, and to adjust the land and water economy to that supply." Accordingly, one of the Committee's recommendations was that attention be given to small water developments, in order to make fuller use of the water. The study confined itself to the Great Plains, but the findings apply to the whole region of undependable rain. Eight months after the Committee's report the Water Facilities Act was passed.

The Water Facilities Program attacks one aspect of a larger problem. It should be thought of as one means among many of attaining better land use. The Water Facilities Program is therefore associated, in planning and in operations, with other Federal land-use programs. And it makes, in the West, its particular contribution to the general objective of helping "those who use the land to achieve stability of income, stability in the use of our basic land resource, low-cost production and distribution, and the widest possible consumption of our abundant production," in the words of E. H. Wiecking.

Non-Federal agencies also are concerned with the work on Water Facilities. State and county land-use planning committees, State water departments and State agricultural colleges all have something to contribute toward the formulation and realization of the program.

If Water Facilities work helps toward better use of the land, it should help the work of other agencies and programs which aim at the same goal. Changes in type-of-farming, as from soil-depleting cash grain to soil-conserving grass and beef production, may be made possible by a system of stock ponds.

Ranch reorganization in the Great Plains, as sometimes recommended by county land-use planning committees, may call for irrigation of feed-crop land. Range restoration may be furthered by new stock-water developments which allow the cattle to graze more evenly. This in turn may result in preventing erosion and so promote the conservation of resources of soil and vegetation.

The land-use problem is a whole bundle of problems and many instruments must be used in helping farmers make the appropriate readjustments.

—Ray Miller, *Office of Land Use Coordination.*

[Letters and other contributions to this new department are invited.—The Editor.]

Group Action and Progress

by J. ROY ALLGYER

IT was early one afternoon during the first week in December when we arrived at Jim Smith's farm near Halifax, Va. With me were several other representatives from the Washington and regional offices of the Farm Security Administration. We had arranged an informal meeting with Mr. Smith and some of his neighbors who had joined with him in obtaining a community service loan from our agency. Eight of them, including Mr. Smith, had gathered to talk with us. (His name is not Smith; I use that for narrative purposes.)

This was one of several similar meetings conducted that week in North Carolina and Virginia to find out just how much the participants understood about the establishment and operation of community services and to what extent these groups might be used as a nucleus in carrying out a supervisory and educational program on cooperatives. More than 225,000 families now participate in the 11,500 group services of the Farm Security Administration.

Earlier in the year, Smith had obtained a tenant purchase loan to buy a farm of his own. When the county supervisor was helping him draw up his farm plan, they realized that some heavy equipment was needed, including harvesting machinery, which Smith alone could not afford to buy. Knowing that other farmers in the community needed the same equipment, Smith got 11 of them to join him in applying for a community service loan to purchase a tractor, disk harrow, plow, and combine. The agreement stipulated a charge of $1.25 an acre for plowing and harrowing. The fee for harvesting small grain was $3 an acre, while the charge for harvesting lespedeza was at a rate not to exceed 40 per cent of the crop. The latter charge depended upon the yield. A total of 150 acres was signed up for the service. With the volume of participation required for sound operation and liquidation of the loan assured, the application was approved for a loan of $1,165, with Smith as master-borrower.

Cooperation Lightens Many Problems

Although the 11 neighboring farmers were all participants in the service, this was the first time they had been called together as a group. After introductions, someone suggested that because of the cold, raw wind the nearby tobacco shed would be more comfortable for our discussion than the house. Everyone agreed. There were no formalities. We started talking about matters like rehabilitation loans and community and cooperative service loans. The subsequent discussion brought out so many mutual problems and helpful suggestions that the group decided much could be gained from future meetings to discuss the operation of their particular service or other needs which they might have.

The meeting furnished a concrete illustration of what the group can do to iron out questions or misunderstandings. One member reported that Smith had missed harvesting considerable seed because the machine had not been set sufficiently low to cut the seed. In reply, Smith pointed out that he had been unable to set the cutter blade as low as he would have liked because of numerous small rocks in the field. Someone suggested that the rocks be picked up and hauled away, but it seems there were too many of them and it would require too much work. Someone else suggested that perhaps he could use a roller to level off the ground before seeding. Then the operator of the combine could cut the lespedeza closer to the ground.

During this discussion, several men expressed the opinion that a heavy roller would be a valuable piece of equipment on their farms. Their land also had stones which had interfered, or would interfere, with the harvesting of small grain or seed. If they were to grow grain crops, some way should be found to meet this difficulty.

Savings in Work, Seed, Harvests

The talk about preparing the seedbed led to the question of what equipment had been used to plant the seed. The replies showed that for the most part the seed had been broadcast. Then we asked about the difference in yield between broadcasting and drilling grain. Some thought it would be at least 5 bushels an acre. Others thought it would be 8 to 10 bushels. The Virginia Experiment Station, a former county agent said, reports that an average increase of 10 to 20 percent could be expected in favor of the drilled grain. There is also a saving in the amount of seed used, a half bushel an acre being a conservative estimate.

When we asked if drills or seeders were available in the community, one man replied that there were a few old drills but that he would rather broadcast his grain than bother with a worn-out piece of equipment. We suggested that this group, or part of the group, get together and work out a drill or seeding service, pointing out that the difference in cost of seed and yield should pay for it within a limited time. Several members felt this would be a worth-while service.

We next inquired about the operation of the combine. One farmer reported that he had saved 5 acres of wheat; another 8 acres, besides his entire crop of lespedeza. One man said that he never would have been able to get any one to thresh his 3 acres of wheat; in fact, he would have had to cradle it or borrow a mower to cut it—and would still have had the problem of finding someone to thresh it.

There was general agreement that Smith had been a satisfactory operator and had lived up to his part of the contract. As a matter of fact, Smith had a request from a nonparticipating neighbor to cut 25 acres of lespedeza, but he refused because the acreage he had contracted for with the participants in the group service was enough to keep him busy during the harvesting season. The farmers who had small acreages seemed to appreciate Smith's honesty in living up to his agreement.

Joining Forces for Better Farming

The discussion of harvesting grain and lespedeza brought up the question of growing only tobacco. Prices last year were low and the men admitted that if they were to succeed in growing diversified crops they would have to have the necessary equipment.

They said since they had been assured of a harvesting service they saw their way clear for the first time to plant other crops. Everyone who had grown wheat was assured of a flour supply for his family. This meant that there would be no cash expenditure for the purchase of flour. The wheat would be taken to a nearby mill and for a small charge it would be group into flour.

The story about saving the lespedeza seed was like that of wheat. Lespedeza had been harvested for the first time by a number of these farmers who had small acreages. This meant some additional cash income after keeping out sufficient seed for use on their own farms.

A question was raised about the proper cleaning of seed and this, of course, would apply to both wheat and lespedeza. We learned that most of the lespedeza was offered for sale without being cleaned, which usually meant considerable dockage in price and often resulted in dissatisfaction and controversy. Several of the men were interested in providing themselves with seed cleaning and treating services, and thought the matter should receive further consideration.

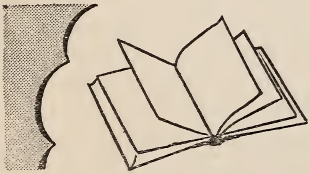
An inquiry regarding the harvesting of hay crops revealed an absence of adequate haying equipment, such as mowers and rakes, in the community. It became obvious that the availability of proper haying equipment would encourage the growing of hay crops necessary for the conservation and building up of the soil, and for livestock feed.

Our next question was about the kind of seed that had been used. It developed that the seed corn which had been grown represented an old variety, the name of which no one knew. It had been grown on the same farm year after year, with not too much care in its selection to start with.

Our suggestion was that one or two of the best farmers in the group could purchase good certified seed of known value and variety, plant it, and produce a quantity that the other farmers could purchase as seed at the close of the season. Better still, each participant could buy a small quantity of seed for his own use. This would be particularly appropriate with small grain. With the assurance of a combine service, each one of them would have a sufficient amount of good seed available for his entire seeding the following year.

After talking with these eight farmers for an hour and a half it was seen that although one service is now operating in the community, there is actual need for at least another half dozen or more. Even the F. S. A. county supervisor gained more appreciation of the value of the group services. He realized he had only made a beginning when he helped Smith to set up the combine service, and said he saw an excellent opportunity for carrying on a program of education and supervision, not only through this group but also through other similar groups in a county.

The conclusions that can be drawn from this one meeting in a tobacco shed may be summarized thus: Farmers in similar circumstances are willing to come together to talk over their mutual problems; when an apportunity is given to discuss their needs, the group becomes interested and may be willing to do something about supplying the services needed; the thousands of similar groups established throughout the United States provide an excellent medium through which an intensive educational and cooperative program can be conducted.



Books

AGRICULTURE IN MODERN LIFE. *By O. E. Baker, Ralph Borsodi, and M. L. Wilson. Harper and Brothers. New York. 303 pp. 1939. illustrated.*

"One new economic factor or technological device brought into the agricultural pattern may cause a complicated series of changes throughout every phase of farm life. The millions of phases of the rural cultural pattern are delicately balanced in an intricate interrelationship. If one thing is disturbed, the whole pattern is forced temporarily out of balance; when finally equilibrium is regained, the complexion of the whole has changed."

This quotation from "Agriculture in Modern Life" orients the situation in rural welfare and rural culture with which the three authors of the book are concerned and indicates the problem for which an answer is sought.

For two centuries the pattern of farm life has been subjected to the impact of fast-moving technological change. Improvements in transportation, the development of new markets, expansion of industries, the opportunities available for surplus farm population, and the development of power and machines for use on farms all had a bearing on the change from a self-sufficing, rugged type of agriculture, that offered few physical comforts but held a high degree of security, to one in which production for sale predominates, and offers more of the attractions of urban life but lacks the economic security of the earlier years.

The adjustment to an industrial world, the encroachment of urban ideals on the established pattern of rural culture, is a matter of primary concern of the authors. The basis for this feeling of uneasiness is not the same. There is little duplication in the three discussions in the volume but the conclusions and the suggestions for correcting the situation are strikingly similar.

The first section, Our Rural People, contributed by Dr. Baker, provides the background for a discussion of rural-life problems. Dr. Baker singles out two sources of grave concern, both of which originate in the maladjustment between people and their environment. These are the gradual loss of land ownership and the increase of farm tenancy and the declining birth rate.

The drift of wealth to urban centers, the transfer of land ownership from rural people, is one factor responsible for the decreasing share of the agricultural income received by farmers, and for increasing rural poverty.

To Dr. Baker, however, the social and political implications are more important than the purely economic ones. The impact of technology, science, invention, and mechanical power has been to destroy the traditional familistic rural culture. With an increasing dependence on industrial and commercial life and the adoption of urban standards, the consequences of a rapidly declining national population to a debt-burdened agriculture debt would be serious.

A return to the familistic culture and a widespread ownership of land would correct or diminish the bad effects of certain current trends, namely, low prices of farm products, resulting from continued production in the face of a declining or stationary population; overvaluation of land, increasing mortgage debt, and a drift of wealth to the cities; the reduction of owners to a tenant status; and the drift of rural youth to cities and the further impoverishment of rural areas.

Two related postulates, the basic principles of national policy, are to insure the reproduction of the race and the widespread ownership of land by farmers. The solution of the rural problem rests upon the adherence to these principles. To achieve the objectives, a reversal of present trends in farm and community organization is necessary. Rural youth should be trained for agriculture and encouraged to remain in agriculture. Farm incomes and farm living standards would be increased by greater attention to production for home use, by making investments for living, and through efforts to reduce debt. Economic benefits would be supplemented with a restoration of rural values. The key to this implies a cessation of psychological changes, a return to the family ideals, recognition of the divine in man, and loyalty to the state. Deeper satisfactions in farm life imply an emphasis on the dignity of labor, a willingness to sacrifice present satisfactions for future possession, and a comprehension of the need for widespread distribution of property. A return to the familistic culture and rural values sacrificed to specialization and commercialization would mean a revival of the ancient voluntary institutions, the school, the fraternal order, and the church. The responsibility for restoration of rural ideals and institutions rests with the state and with the church.

In three short chapters in part II, Mr. Borsodi sets forth his plan for rural life. He prefaces his plan with the cultural conditions of modern life, which are rule by science rather than by tradition, guidance by natural law rather than by dogma and a tendency to give greater value to facts and figures than to wisdom. The modern age is characterized as the machine age, as opposed to a handicraft age; a credit economy as compared to a barter economy, and what is urban and metropolitan as contrasted to what is rural and agrarian. The agriculture that is developed in a society dominated by the scientific, mechanic, industrial, commercial, and urban is essentially an agriculture which is a business and an industry rather than the usual conception of agriculture as a science and an art. Modern agriculture becomes a business first and a way of life second.

Mr. Borsodi suggests that the solution of our agricultural problem rests upon a consideration of certain aspects of agriculture, usually neglected because they are considered fixed and unchangeable. These would include: land tenure with the accompanying specter of land speculation; mechanization, and the abuse of the principle of specialization;

the treatment of the soil as chemical capital to be converted into wealth; the devotion to farming for the market and the accompanying high cost of distribution. Mr. Borsodi challenges sharply the mechanistic concept and questions the mechanical "progress" that released from agriculture 20,000,000 workers to industry, business, and the professions at a time when the technologically unemployed in the city were counted by millions.

He questions the ultimate saving of increased efficiency of production which is only balanced by an increased cost of distribution. Why, with increased efficiency in production and a lowering of costs, has the farmer's share of the consumer's dollar not grown larger? The economists have accepted here a fundamental error. Efficiency in distribution is correlated with efficiency of production, but the fact is that distribution costs are inverse to production costs. Although costs may be lowered by concentrating production and producing a surplus at one point, this concentration results in higher costs of distribution. The remedies, stated more positively than those of Dr. Baker, are not dissimilar.

Mr. Borsodi would abandon industrial farming, would increase production for farm and home consumption, and would adapt modern methods to small-scale operations. The measures would involve education as to the futility of the industrialization of agriculture, and provide encouragement to revive small businesses in connection with farming. As an ideal, the satisfaction of the needs of the family should be placed above the development of an agricultural industry.

In Part III, Science and Folklore in Rural Life, Mr. Wilson summarizes the influence of technical developments and economic changes on rural living and finds them not all bad. American rural culture is undergoing a rapid change. Basic changes result from developments in science and technology. From the freehold farm and a self-sufficient, rugged, lusty, and independent culture, the shift has been toward greater material comforts, urban conveniences, and spectator amusements. While agreeing with Mr. Borsodi that the industrial revolution has introduced much that is ugly into our civilization and that some labor-saving specialization may be lost motion, Mr. Wilson maintains that such things as higher material standards, automobiles, radios, telephones, electricity, and access to libraries bring much that is desirable to rural communities. Disadvantages arise because technical benefits are not equally distributed, but this inequality and the costs of excessive commercialization are not causes for acute pessimism. Rural America is faced with a period of cultural transition and the problem is to determine what is good and what is bad in scientific culture and to combine this with the best from the self-sufficient, folklore farming culture that it is displacing.

The areas of self-sufficient culture remaining are areas of surplus population and areas in which the population tends to increase. With no outlet for the excess population, lower standards of living result. This tendency to congestion and such characteristics as low productivity would be unwise to perpetuate, but such virtues as the settled family enterprise, the emphasis on the home, social stability, community contacts, and the psychologically important "complete experience" can well be preserved. Limitations of the self-sufficient economy, such as the need for cash and the difficulty of maintaining a self-sufficient system in the arid regions, need not prevent the endeavor to consolidate the gains of science with the best of the older rural culture. Some brief descriptions of communities where the effort to develop the benefits of both types of culture are given.

Despite these three different approaches to the problem of Agriculture in Modern Life and despite the variations of treatment and divergence of background, the authors agree in the main on the causes of agricultural problems and can reach some accord regarding their solution. That solution is a return in some measure to the practices that gave solidity to the rural cultural patterns of a century ago.

Here is a book that will give pleasure to all readers who are interested in the economic and social problems related to agriculture. Although he may have gone over the ground before, the reader should find much to interest and stimulate him. He may not agree that the culture which stemmed from a hard-working, rugged, self-sufficient economy is superior to that culture now springing from commercial rural areas. He may disagree as to the advantage of reversing present trends to preserve a part of that culture to modern life. He may lack confidence in the effectiveness of measures proposed to achieve this end—the authors themselves do not reach a perfect agreement—but he can hardly fail to appreciate the viewpoint presented and to profit from reading "Agriculture and Modern Life."—RUSSELL S. KIFER.

SOIL CONSERVATION. *By Hugh Hammond Bennett. McGraw-Hill. New York. 993 pp. 1939 illustrated*

"Millions of acres of our land are ruined, other millions of acres already have been harmed . . . not mere soil is going down the slopes, down the rivers, down to the wastes of the oceans. Opportunity, security, the chance for a man to make a living from the land—these are going too." Thus Dr. Bennett writes, and then, for 958 pages, with 389 footnotes, 358 pictures, figures and charts, 61 graphs, 46 tables, and 17 maps distributed over 43 chapters, he tells how and why, and when and where—and what can be done about it.

Vividly rendered, this story of erosion and civilization, of cause and effect, is at once both tragic and enheartening.

Wherever vegetation will flourish on this earth, approximately 8 inches of dirt supplies the food for all the plant and animal life. The history of the rise and fall of nations is, in great part, the history of what has happened to this 8 inches of dirt. The exploitation and maladministration of the land has been the cause of both the conquest and the decay of many civilizations. It seems as if wherever man has cut the forest, plowed the soil, or herded cattle, he has left a blight upon the earth. The land of Abraham, the slopes of Amanus and Lebanon, are barren now. The irrigated terraces of Phoenicia and Syria and Sybaris and Carthage are no more. The fertile fields surrounding ancient Antioch, once a city of 400,000 persons, are today bare and rocky, and fewer than 30,000 persons reside there. Tarsus, ancient seaport once visited by Cleopatra's fleet, now lies 10 miles from water because of plowed fields and rivers heavy with sediment. The followers of Cyrus and Xerxes, of Alexander the Great and Antar, of Genghis Khan and Ptolemy I, the lands of Greece and Persia, of Mesopotamia and Babylon—of all those people, of all that land once favored with rich soils, flowing waters, and gentle climates—only the sun remains. In Asia, Africa, Europe, North and South America, the history of erosion, written upon the earth's surface, is the story of man's hope, ignorance, and despair. Poor farming has ruined land in less than a generation; poor land use administration on a larger scale has caused the death of millions, either by starvation, or in battle for more land. Man has the uncanny capacity, it seems, for making a mess of nature's gifts.

That is the tragic part of it.

Even in our country, young and as rich as we are, wind erosion, water erosion, gullying, erosion, floods, and sedimentation already have taken their toll. Our misuse of the land has left gigantic scars upon the surface of the land. Due to either ignorance or greed, millions of acres and billions of dollars and thousands of lives have been wasted. Is this necessary? Are we to permit 8 inches of uncontrolled dirt to decide our destiny? Dr. Bennett maintains that we need not.

Soil conservation is many things. It is crop rotation, strip cropping, field contouring, terracing, grass planting, and constructing run-off channels. It is the growing of trees for windbreaks, the building of small dams and checks to conserve rainfall and prevent gullying, and it is the intelligent application of a few hand tools, a couple of logs, a bag of seed, some spikes, two willing hands, and the ability to follow directions. It is also the building of levees and the lining of river banks, the construction of huge dams and flood control projects and the carrying out of programs requiring millions of dollars.

Dr. Bennett tells the reader just what to plant and where and when to plant it to get the best results. The fastest growing trees for making windbreaks, the most desirable bushes for stopping small gullies, the easiest way to rehabilitate and to prevent erosion are all mentioned. He illustrates and tells of the things the farmer can do for himself, of what the county and State can do for its citizens, and what the Nation can do for all. And he mentions what has been done and is being done. That is the enheartening part.

The perusal of "Soil Conservation" may give one the feeling that only a nation of profligates would leave to coming generations a wasted land heavily burdened and unable to pay its way.

Or, to put it another way—because nations are composed of individuals—only an irresponsible wastrel would knowingly leave to his children a heavily indebted and wasted estate. And with such a belief I do not agree.

Soil conservation may be many things—but it is not politics, war, tariffs, free trade, nor is it changing habits nor the costs of things that farmers buy, and it is not desire for an education for his children.

Even if soil conservation methods were free for the asking, many farmers would never be in position to adopt them; the dire need for forcing their small plots of land to produce the utmost in order that they may obtain the bare necessities of life, to pay their taxes and interest, and educate their children, may be so great as to make soil conservation, for them, an impossible achievement. Such men are not wastrels—nor is a nation composed of such men a nation of profligates.

Then again, the records show that many nations—and many civilizations—have practiced soil conservation only to pass into the limbo of forgotten things, leaving behind them for tombstones their irrigation canals and aqueducts, their dams and terraced slopes.

In an economy where men of the soil have always left it in their search for the stars, soil conservation is just one small answer to the many problems confronting us in this enigma, the world in which we live.

Still, for all those who are interested in conservation, in the welfare of the people and the future of the land, "Soil Conservation" is a "must" book.

—Donn Layne.

√ For your attention

FOREST RESOURCES OF SOUTHWEST LOUISIANA. *J. W. Cruikshank. Forest Survey Release No. 43. Southern Forest Exp. Station, New Orleans, La. April 1939.*

The object of the study upon which this bulletin reports was: to make an inventory of the present supply of timber and other products; to ascertain the rate at which this supply is being insured through growth; to determine the rate at which the supply is being diminished; to determine present requirement and probable future trend in the requirement for timber and other forest products; and to correlate these findings with existing and anticipated economic conditions so that policies for the effective use of lands suitable for forest production may be formulated.

STATE REFORESTATION IN TWO NEW YORK COUNTIES—*The Story of the Land and the People. T. E. LaMont. Cornell University Bull. 712. Ithaca, N. Y. February 1939.*

This bulletin gives an account of how little social disturbance is created by a well-organized, unhurried, long-time purchase program. For example, only 17 percent of the parcels sold were operated during the year before State purchase, 40 percent had been idle 10 years or more. In reforestation areas, one-third of the parcels sold never had a house. Of those that once had a house, the house or barn was gone or falling on 61 percent, and on only 21 percent did former owners consider house and barn fair or good. Those selling gave various reasons: farm of no use to owner, unproductive, timber had been cut, location was poor, or they had too much land.

THE SOCIOLOGY OF DROUGHT. *Allen D. Edwards. Rural Sociology 4 (2) 190. Rural Sociological Society, La. State Univ. Press. University, La. June 1939.*

This study of a drought-area county in the Southern Great Plains attempts to analyze the effects of recurrent droughts on population, systems of farming, standard of living, community organization, public relief and assistance, and attitudes and opinions. A striking similarity of the effects of drought upon community life is apparent in a comparison of several drought periods. The general pattern of social changes during drought is summarized. An outstanding feature of the recent drought of 1932–36 has been the large amount of Federal assistance which has served to stabilize the farming economy. Recommendations to avert the worst disastrous effects of future droughts do not involve a complete shift from wheat growing, but rather a better adaptation of this type of farming to the climate of the Great Plains along with increased diversification and greater emphasis on measures designed to control soil blowing. (Abstract.)

MANAGEMENT OF TAX REVERTED LANDS IN OREGON. *Arthur Damschen and V. B. Stanberry. Oregon State Planning Board, Portland, Oreg. 1938.*

This bulletin discusses problems of administering tax-reverted lands in Oregon and presents information useful to county officials in managing such lands. Among the subjects are the growth, extent, and value of lands reverted to county ownership; the problems facing county officials in administering tax reverted lands, and accomplishments in this direction by various counties; methods and procedure for land management, and best methods of utilizing types of property; Oregon legislation relating to land management; policies and programs developed by other States; extent of delinquency in Oregon and probable future experience.

DESIGN FOR PENNSYLVANIA LOCALITIES. *H. F. Alderfer. National Municipal Review. XXVIII (10) 698–707. October 1939.*

Reorganization of local governments along up-to-date, efficient lines—home rule, manager plan for counties and cities, strong merit system, improved financial procedure—must come, the author believes, if smaller units of government are to be preserved as part of our democratic processes. (Abstract.)

YOUR HOME TOWN. . . . A COMMUNITY DEVELOPMENT HANDBOOK. *Frederick P. Clark. New Hampshire Planning and Development Commission. Concord, N. H. 1939.*

Published "in response to demand for nontechnical, understandable information on various problems associated with development of a community," this attractive booklet by a planning director merits attention.

Its foreword significantly expresses the Commission's hope "that this handbook may help in stimulating local interest and activity in making New Hampshire not necessarily 'bigger,' but *better*." It is attractive, well illustrated, informative, and practical.

It mentions, among opportunities for community development, prospects for industrial or recreational expansion but points out that towns that have arrived at the peak of their possible or desired development should have the objective of continued prosperity.

Other topics treated in terse, pointed fashion include: Future population; changing trends in vital statistics and residential areas; the need for facts on industrial possibilities; questions with regard to a new industry and present conditions; community appearance; roadside development, street lay-out, unneeded streets, zoning and traffic; transportation; parks and playgrounds the provision of community services; the community financial plan; the preparation of a community development plan.

HISTORICAL SKETCHES OF HARFORD COUNTY, MARYLAND. *Samuel Mason, Jr. Published by the Author. 119 pp. 1940.*

Mr. Mason wrote his friendly, interesting, cheerful book during his winter evenings on the basis of his reading, observations, notes and memories about his community, which, obviously, he loves with an understanding love.

The volume may be said to have primarily a local appeal, but in a broader sense it should arouse interest on two points: Its subject matter pertains to a history with which many have come in contact either through reading or ancestral connections, and it is an example of the contribution which farmers—or others—could make toward the preservation of historical facts, folklore and information of their own communities.

That is an important basis of formal history. Mr. Mason writes of exploration and early settlement, frontier forts and border troubles, iron furnaces and forges and mills. He concludes with what he calls 18 "unrelated sketches."

The details he gives are romantic; the names, even, are entrancing: Baltimore on Bush; Old Joppa, Harford Town, Bald Friar, Conowingo Flint Mill, Headless Ghost.

Russell Lord contributed an introduction in which he aptly says: "These rolling hills and sheltered valleys of Harford County at the Chesapeake headwaters yield a great deal more than grain and livestock now. They yield ease, grace and serenity, legends and tales that rise above the Almighty Dollar and laugh about it, poems to this soil, eloquent singing and painting, unaffected but distinguished prose in the county papers, and books such as this."

MARKETING CORDWOOD IN NEW HAMPSHIRE. *Henry I. Baldwin. Journal of Forestry 37 (6) 474. Society of American Foresters, Mills Bldg. Washington, D. C. June 1939.*

It is comparatively easy, Mr. Baldwin says, to engage in forest improvement activities when the public pays the bill, but it is much more difficult to engage in such activities when the resulting forest products must pay the bill. In this article Dr. Baldwin describes what is being done in New Hampshire to market the fuelwood resulting from stand improvement with a profit to the forest owner, at the same time giving employment to people in distress at low cost to the public.

SUMMARY OF SELECTED FEDERAL LEGISLATION OF INTEREST TO PLANNING AGENCIES, 76TH CONGRESS, FIRST SESSION. *National Resources Planning Board Circular XIII. Washington, D. C. September 1939.*

This summary presents a selected coverage of the major provisions of the following laws: Appropriation to the Board for the fiscal year ending June 30, 1940; extension of Joint Congressional Committee investigating phosphate resources of the United States; authorization for acquiring stocks of strategic and critical materials and scientific and technologic investigations related thereto, etc.

CURRENT PROGRAMS OF WORK—STATE PLANNING BOARDS. *Circular XI, National Resources Planning Board. Washington, D. C. September 1939.*

The National Resources Planning Board has here assembled a statement of current activities of all State planning boards for the period July 1–December 31, 1939. Programs to be carried out in cooperation with the *Bureau of Agricultural* Economics are listed and briefly described.

A GUIDE FOR COURSES IN THE HISTORY OF AMERICAN AGRICULTURE. *E. E. Edwards. United States Department of Agriculture Bibliographical Contribution No. 35. Washington, D. C. September 1939.*

This bibliography is designed to assist students and teachers in the correlation of class lectures, discussions, and readings in courses on the history of American agriculture. It supplements, as a bibliography, but does not supersede United States Department of Agriculture, Misc. Pub. 84, Bibliography of the History of American Agriculture in the United States, issued in 1939.

RURAL RELIEF AND RECOVERY. *Rupert B. Vance. Social Problems Report No. 3. W. P. A. Washington, D. C. 1939.*

Many persons seem to find it difficult to understand why there should be so much need for relief in rural sections, especially among farmers who supply the Nation with food. Nevertheless, although rural relief needs have declined since 1935, 3,500,000 rural families have received assistance at some one time.

This pamphlet is designed to present nontechnical information to show what has happened to our agricultural population. The author says that the long rural depression, population pressure, unequal opportunity, farm tenancy, maladjustment of land resources, drought, and even village problems have been responsible in some measure for the position of the agricultural population.

NATIONAL RESOURCES PLANNING FACTS FOR USE, CONSERVATION, ORGANIZATION—PEOPLE, LAND, WATER, MINERAL. *National Resources Committee. Government Printing Office. Washington, D. C. 1939.*

Our national resources, this brief summary says, include "the 2,000,000,000 acres of land within the United States, the rain and snow that falls on this land, the rivers, waterfalls, and lakes, the coal, oil, gold and silver, and other mineral deposits that lie on and beneath the land, the people that live here and their multitude of talents, skills, and activities." It adds that "the wealth of the Nation is measured in the way we conserve, use, and develop these resources." Today the wasteful, planless use of our still great resources continues in many fields. Pertinent facts concerning our population, land, water, and mineral resources are summarized, and the functions of the National Resources Committee are briefly outlined.

TAX DELINQUENT LAND IN CALIFORNIA—A REVIEW OF THE PROBLEM AND A PLAN FOR ITS SOLUTION. *California State Planning Board. Sacramento. 1938.*

This report deals with one of the State's more serious fiscal and land-use problems and contains a plan designed to reduce tax delinquency and to handle tax-deed land.

Recommendations include plans to eliminate certain causes of land-tax delinquency by county, city, and State action; improve State laws governing land-tax delinquency and the management of land forfeited by private owners; prepare complete records of land delinquent for 5 years and quiet title to each parcel deeded to the State; classify all land which has been deeded to the State to determine its best ultimate use and ownership; and to allocate tax-deeded land in accordance with recommendations of the State land commission.

RELATION OF ASSESSED VALUE TO SALES VALUE OF KANSAS REAL ESTATE, 1933–37, INCLUSIVE. *Kansas State Planning Board. Topeka. July 1939.*

In the spring of 1938 the Kansas State Planning Board was requested by the State tax commission (now the commission of revenue and taxation) to institute a study to compare the assessed valuation with the sales value of real estate transferred in the 70 counties of the State during the years 1933–37, inclusive, the objective being to obtain information which would aid the commission in its work of equalizing real-estate values throughout the State.

Kansas statutes governing the assessment of real estate provide that it shall be assessed at its "true value in money." Several explanations have been made for the inequalities in the administration of the law: (1) the law requires that township trustee be appointed deputy assessor for the townships in which elected; (2) the law requires that assessments be completed within 50 days; (3) the tendency toward competitive undervaluation by the assessors of the various districts in an effort to put a larger share of the tax burden on the taxpayers of other districts.

In interpreting the results of the study (given only in tabular form) the planning board points out that while the small number of transfers made over the 5-year period constitutes a small sample from which to draw conclusions for the whole State, the sample provides the only available information. The total assessed valuation of all properties involved in the transactions studied was approximately $25,000,000, of which about $9,000,000 represented rural and $16,000,000 urban property. The total assessed value of rural and urban property was more than $1,000,000,000, and the total assessed value of the transferred real estate studied was, therefore, 2.4 percent of the total assessed value of all real estate in the counties studied.

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Kimmel, Roy I., "Farms Tailored To Fit," May–June 1939.
AREA ADJUSTMENT:
Maddox, James G., "Area Adjustments in England and Wales," November–December 1939.
CONSERVATION:
Gabrielson, Ira N., "Farmer Conservation," January–February 1939.
COUNTY PLANNING:
Adam, D. A., "Farmer-Made Programs in a Texas County," March–April 1939.
Allin, Bushrod W., "Facets of County Planning—II. Circles of Influence," January–February 1939.
Elliott, F. F., "We, the People . . .," May–June 1939.
Henderson, C. O., "Teamwork in Mississippi," July–August 1939.
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What Price Conservation?

by ERIC ENGLUND

WHAT CAN the United States afford to spend for agricultural conservation?

The development of the implications of this question—entirely apart from periodic debates on appropriations—might help advance the progress of recent years in conservational policies and programs. Theoretical pects of the question, including the conflict of interest, private and blic, between the present and the future, long have engaged the ntion of economists.

From the private standpoint, it has been pointed out that the amount at the farmer or any other operator can afford to spend to conserve his resources—farm land, forest, or any other—is limited by the present value of anticipated returns from the expenditure. If he spends borrowed capital, or his own capital for which he has alternative opportunity of investment, the rate of interest would govern considerations of the present value of future returns.

It is sometimes assumed that public expenditures for conservation are subject to the same general principle as those by the individual farmer, that is, the principle of time preference translated into some rate-of-nterest concept. The "present value" of future returns, "computed" on the basis of society's rate of time preference, has been thought to represent the limit of the price which society can afford to pay for conservation. On theoretical grounds, this assumption may have some degree of validity, as it seems reasonable to suppose that an advantage to be gained by society in the distant future would appear less important than if it were near at hand. But what is society's "rate of time preference"?

Private and Social Standards of Value

It has been recognized for some time that the concept of time preference, long related to interest in economic theory, is not equally applicable to the individual operator and to society.

Surely society, which is expected to exist in perpetuity, should have a different standard of values as between the present and the future from that of the individual, whose appraisal of the future is governed by his own short span of life and perhaps by a shadowy allowance for a generation or two of his descendents. His present appraisal of the future may be expressed in terms of a rate of interest.

But this criterion of private investment seems to be of uncertain value as a standard for public policy, including public expenditure for conservation. It is doubtful that compound interest has a place in determining what society can afford to spend for its own preservation and to insure to itself those values which it regards as fundamental to its own stability and progress.

The appraisal of these values must be made in terms of the social and cultural qualities which the society aspires to achieve and maintain. They are hardly measurable, even theoretically, in monetary terms. Moreover, society must look farther ahead than is practicable for the individual.

If future monetary values to society were ascertainable separately from other values and discounted at any given rate of compound interest, it might be possible to demonstrate that society can now afford to do relatively little toward safeguarding its future.

Agricultural Conservation Is Essential

Compound interest is a concept so largely private in character as to have very little applicability to questions of long-time social policy, because the end itself defies effort at valuation in monetary terms.

Conservation of agricultural resources—which includes both present utilization and preservation for future use—surely is essential to the welfare of society in perpetuity.

If, to use an extreme assumption, the essential natural resources available to a society were so wantonly exploited as to face destruction, the very basis of that society surely would be most seriously impaired.

On the other hand, it may be assumed that no society ever disintegrated because of having too much of natural resources, or because of having conserved them too well.

It is conceivable, as another extreme hypothesis, that a society occupying a given area of very abundant natural resources might be invaded by some aggressive, "have-not" people desiring command over these resources and impelled by the notion that international conquest, rather than international trade, is the means of diffusing the advantages of abundant resources.

The possibility, under certain circumstances, that abundant resources might invite conquest, however, presupposes that the society had neglected its own defenses. Abundance of resources is only a part of what is required for national security. It may be an increasingly important part as long as the modern world fails to organize itself against war. Modern war requires more and more the integration of the whole State and possibly all of its resources.

The Difference Between Public and Private Finances

Be this as it may, it seems reasonable to suppose that the conservation of natural resources is one of the concrete means to which society must look for its own perpetual wellbeing.

It may be contended that from the standpoint of public finance the time preference of society, after all, is not significantly different from that of the individual as it is reflected in rate of interest, except for the difference in interest rates on private and public borrowing.

It could be asserted that society of itself has no funds for conservation expenditure except what a government gets from the people through taxation. When a dollar is taken from the individual taxpayer and expended for conservation, he is deprived of a purchasing power which, if spent on a private conservation enterprise at "the going rate of interest," would yield him a future return. This return, by definition, would equal his present expenditure after allowing for the rate of discount.

Such a supposed identity of private and public considerations, however, would fail to take into account not only the distinction between broad social values and the individual's market values, but also the strong possibility that society, through wise management of its finances, may invest in conservation without depriving the people as a whole of either the present enjoyment of their buying power or the advantage of increased resources for future use.

This could be true if such financing of a conservation program resulted, directly or indirectly, in the utilization of productive power, including labor, which otherwise would be idle and perhaps maintained by public expenditures for unemployment relief.

These productive resources are not only of the type that may be used now or saved for future use—such as deposits of oil, ore, and the like—but also may consist of resources which if not used now are forever lost to society. The latter resource is conspicuously represented by labor power, which being inseparable from today, is wasted if not used today.

Nature's productive powers also represent a resource which may be lost so far as today's productivity is concerned if the use of them is postponed until tomorrow. For example, a farm woodlot or any other area of land best suited for forest may be misused, the soil eroded, or useful species of trees not given opportunity to grow. That land and with it air, water, and sunshine represent productive powers which, when given the opportunity through the forest as a complex biological organism, may now produce much for the future security and well-being of society. On the other hand, that product of today is lost if nature is not given the opportunity to produce.

A Decisive Question of National Policy

It has been said that the decisive question from the standpoint of national policy is: How much of the current national income is Government justified in withholding or diverting from present consumption to expend upon productive resources for future use? This is a basic question in much of the theoretical analysis done on the question of the price that society can afford to pay for conservation. It is based on the assumption that whatever is spent for conservation is withdrawn from current consumption or from investment in some productive enterprise.

This assumption necessarily would be true only if there were no idle funds, idle capital goods, and idle labor, or if all these resources were already employed in a manner more productive of public good than if employed in conservation work. That much of these resources have been idle in the past 10 years and are still idle does not need demonstration.

What needs to be considered, however, is the possibility of so financing conservation that a part of these idle resources will be used for conservation without diverting purchasing power from present consumption; that is, without requiring the people to curtail present consumption in order to insure a greater abundance of natural resources for enjoyment in the future.

This does not imply that the financing of conservation can be managed so that no resources—labor, funds, equipment—other than those that are idle will be drawn into conservation work. What is here implied is the possibility that the resources which are put to work directly or indirectly by reason of the expenditures for conservation may in the aggregate substantially match the conservation effort.

Additions to Current Income and Future Uses

One of the most common errors in reasoning about public policy is to draw direct parallels between private economy and public economy without recognizing essential differences between them. But even the recognition of the existence of such differences should be used with discrimination. Differences between private economy and public economy in the matter of financing agricultural conservation seem to include (1) that, in the public economy, expenditures and revenues may be balanced over a period of years by systematic resort to the opportunity to borrow and the power to tax, and (2) that judicious public expenditures in depression may serve to avoid much of the appalling waste of labor-time and other resources of production by rescuing these resources from idleness.

To the extent that such expenditures serve to mesh the gears of a partially stalled economic machine and to stimulate it into a faster tempo and more nearly full operation, it seems possible that the expenditure for conservation may add to current income available for consumption and at the same time improve productive resources for future use.

A program of agricultural conservation or other useful public works may be financed either by current taxation or by borrowing. In neither case is it certain that the purchasing power thus expended represents a curtailment of funds that otherwise would be used for other productive purchases or for consumption.

If a conservation program were to be financed by current taxation, much would depend upon the sort of tax used. It does not necessarily follow that a tax exacts from the citizens at a given time only the funds which if not exacted would be used at that time or soon for consumption or for productive work.

Using "Idle Money" to Increase Consumption

In a period of economic depression, and perhaps to a degree at other times, there is undoubtedly more purchasing power available than is actually employed either for consumption or for production. This buying power may be popularly called "idle money," using the term "money" in a broad sense to include bank credits, and reserves of various sorts as well as actual currency.

In other words, in such a period there is much buying power that is not "straining at the bit" to plunge forward into productive enterprise or current consumption. If some of this "idle money" were reached by taxes to raise revenue for conservation or other public works, it might well be that such expenditures would constitute, not a withdrawal from present consumption, but an actual addition to present consumption through the employment of labor and capital resources which otherwise would be idle.

It is neither necessary nor expedient, however, to finance a conservation program wholly or even largely by current taxation in time of depression. Public borrowing is a more readily available means of financing conservation programs in such a time.

When bonds are sold to investors who draw upon their "idle money" to pay for them, it does not follow that the issuance of such bonds would withdraw funds either from present consumption or present production. It is only when public borrowing competes for funds that are eagerly sought by private productive enterprise that such public borrowing might deter business activity and consumption in one direction, while seeking to stimulate them in another through public expenditures.

Bonds, issued to raise funds for conservation or other public works in times of depression, may not immediately be absorbed by investors who buy the bonds in order to put their savings to work but may be taken over by banks and become a basis for credit expansion. This tends to be inflationary, which within limits need not be decried in a period of deflation and economic stagnation.

Deficit Financing in Depression Years

Public borrowing to finance conservation in time of depression may be a part of a more general program of deficit financing in depression years, and it therefore has a vital relation to budget policy. It has been assumed that a healthy fiscal situation invariably required balancing of the budget each year. This does not necessarily follow, unless the usual rules for prudent management of individual private affairs are taken as direct and unmodified criteria for public policy. Moreover, as a practical matter, it may prove more and more difficult, if not impossible, for governments to balance their budget *annually* because of the higher level of expenditures due to the huge responsibility assumed for relief and other aid in depression years, accompanied by reduced revenues.

If deficit financing becomes a deliberate fiscal policy in depression years, it follows that the budget must be balanced over a period of years, through equally deliberate surplus financing in more prosperous years. Otherwise, debt would mount indefinitely, and sooner or later debt charges would reach such a high level that, at any rate of interest, the total interest charge plus current expenditures could not be met by revenues, and would then necessitate perpetual expansion of public debt.

Such expansion in the public debt would lead toward impairment of public credit and the accompanying danger of being unable to meet the huge expenditures that would be inevitable if some great national emergency should come, such as war. An indefinite increase in nationally owned assets may not altogether obviate this danger. These assets might not be usable either to liquidate the national debt or to meet the financial demands of some great national emergency.

Current Expenditures and Capital Expenditures

The operation of the Swedish budget in recent years and other experiences suggest the need for careful consideration of the possibility of deficit and surplus financing and classifying the outlays into two grand divisions—current expenditures and capital expenditures. Certain significant outlays for conservation would fall in the latter division.

The extent to which our agricultural conservation program could be considered a capital expenditure depends largely on whether it is assumed that expenditures are capital expenditures only when made for self-liquidating purposes. From the standpoint of long-time public interest, this may be too restrictive a definition of capital expenditures. A broader definition might recognize the preservation and increase of a number of tangible public assets.

It seems reasonable to assume that conservation expenditures are necessary to the maintenance of a permanent and relatively healthy economy. Under such an economy, future revenues undoubtedly would be larger with a given system and level of taxation, and the conservation expenditures would tend to be self-liquidating to the extent that taxable capacity and yield of revenue would be greater than if these conservation expenditures had not been made. A difficulty of the broader concept of "self liquidation" lies in the uncertainty of definition, including the difficulty of drawing a specific line between capital expenditures and current expenditures.

Reducing the Public Debt in Good Years

Unless it is insisted that a policy of deficit financing must include surplus financing there is danger that advocacy of a "double budget," i. e., capital budget and current budget, may become merely a sort of apologetics for continued deficit financing. The very heart of the problem of alternate periods of deliberate and systematic deficit and surplus financing lies in the necessity of having surplus revenues on an adequate scale in "good years." To reduce the public debt in "good years" is to put the Government in a position to borrow more freely for necessary programs in the succeeding period of depression, or for some other great emergency, as mentioned above.

In passing, it may be noted that if deficit financing in bad times helps to make times less bad, it does not necessarily follow that surplus financing in good times would correspondingly retard business expansion. The Government would retire bonds from current excess revenues over expenditures. The funds thus paid out would be available for investment by those who lately held the bonds; and if money, no longer idle, is in demand to finance private industry, as would more likely be the case in prosperous years, the funds received in exchange for bonds presumably would soon find their way into industry. Be this as it may, the surplus financing would make it possible to reduce the public debt and thereby put the Government into a sound position for resuming deficit financing in the succeeding slump. In this connection it would be necessary to take into account such additions as may have been made in the meantime to the revenue-producing assets of the Government.

Success Rests Also on Public Attitudes

The possibility of the success of such a budget rests only in part on economic grounds. It rests quite as much or more on political considerations—political in the broader sense of that term. It has been demonstrated that public borrowing to meet expenditures for relief and works programs is possible even in the face of the more orthodox doctrine that the country's credit is endangered unless the budget is balanced *each year*. The more difficult issues arise out of the fact that a budget balanced over a period of years must be planned deliberately, as already noted, for both deficit financing and surplus financing.

Surplus financing makes it necessary to maintain and even increase taxes in good times in order to curtail the public debt. In the 1920's there was some criticism of an allegedly too rapid retirement of the national debt. Even in those prosperous years some groups of citizens preferred greater tax reduction to the then prevailing rate of debt reduction.

Any deliberate attempt at surplus financing probably would meet with strong pressure to reduce taxes even in good times. In addition, it would encounter the views of those who would prefer keeping up the public expenditures even in prosperous years in the belief that it would provide still more and better jobs and give still further stimulus to prosperity. The pressure to reduce taxes, also, would be encouraged by the knowledge that the budget seemed "over balanced."

Public Understanding and Approval

These and other issues confronting such a budget policy might be manageable, if at all, only in an atmosphere of public understanding and approval. This presupposes a degree of public understanding and singleness of purpose which, as yet, may not have been attained to the degree necessary to inaugurate and follow such a program. But such understanding and purpose are essential not only for such a budget policy, but for other economic policies as well.

Such public understanding and constancy of purpose are essential to the realization of the modern hope and faith that a democratic form of government can devise and carry out plans to strengthen and stabilize the economy of the Nation, to use wisely its resources, and to increase the income and economic security of the mass of the people.

To assert that such a program is politically unattainable is to suppose an incurable weakness in democratic society that precludes rational management of the public finances in the face of the size and variety of functions which government everywhere has been brought to assume in modern times. Faith in democracy does not admit of denying that democracy is capable of managing its finances. If the purpose and methods of such a program were made conspicuously clear to the public through wide study and discussion, the possibility of public understanding and approval should be materially advanced.

The Program Must Be Planned First

Expenditures for a program of agricultural conservation, even as a part of a systematic capital budget, would fall far short of their full possibilities unless the program itself were systematically formulated ahead of actual operation. Rural unemployment, both farm and village, represents a substantial part of the total unemployment. In addition, each depression brings back to the country a considerable number of workers who have lost their jobs in the cities.

It has been a part of our public policy to aid these unemployed through works programs and grants on a large scale. Who can suppose that this will not be the policy of the future as large-scale need occurs? It is generally recognized that such aid may be provided most economically, in relation to socially beneficial results, if carried out systematically on well-formulated plans.

To this end an agricultural conservation program should be associated with a rural works program. In order to be most effective both in stimulating employment and in advancing conservation, the work of such a program needs to be formulated in terms of projects and localities, well in advance of actual operation. This would be in contrast to undertakings hastily arranged only when the need for aid to the unemployed is pressing for immediate attention.

A Permanent Staff for Rural Works

Systematic formulation of such a program would involve, first, organization of a permanent staff and a nucleus of other workers who would plan projects which would have the maximum utility from the standpoint of broad usefulness and maximum effectiveness in stimulating employment with the least possible interference with normal employment and its expansion in private enterprise; and second, development of staff members and other workers into a nucleus of a working organization designed for rapid and efficient expansion in time of depression through recruiting from among the unemployed.

In times of depression, agriculture has subsidized heavily the rest of society. For example, after the beginning of the depression of the 1930's, agriculture, with a relatively small exception of the drought years of 1934 and 1936, has made available to the rest of society an undiminished quantity of *use values* in the form of crops and livestock. Meanwhile, the output of goods by urban industries was greatly curtailed. The exchange value received by agriculture per unit of its nearly undiminished output was greatly reduced, and the exchange value per unit of urban industrial output was correspondingly increased. This resulted in a huge subsidy by agriculture to the rest of society.

With an agricultural conservation program coupled with a rural works program, and financed in part at least on the capital budget principle, much conservation work could be done on borrowed funds in times of depression, with borrowings liquidated with revenues in better times. In the depression years agriculture would make available to the rest of society, as it has in past depressions, virtually undiminished quantities of "use values" in the form of essentials of life, but would receive in return greatly reduced exchange values. This would constitute agriculture's return flow of economic subsidy to the rest of society.

In other words, under a plan of financing which would systematize expenditures for agricultural conservation, coupled with a rural works program, the fiscal machinery of society at large in the more prosperous years would provide revenues to meet borrowing for agricultural conservation "subsidies" made largely in depression years. In the same depression years society would in effect be subsidized by agriculture through the usual abundance of essential products at low price and still lower exchange value to agriculture.

Conservation and a Systematic Rural Works Program

Meanwhile, the credit of society could be used in the depression years to expand the conservation work by utilization of large resources that would otherwise be wasted through non-use. This expansion would tend to augment, not decrease, the current income available for consumption in depression years. If this were done with the least possible interference with private employment, it should contribute toward making the depressions less deep than in the absence of such a program or if an attempt were made to finance it by current taxation.

In conclusion, the price which society can afford to pay for a conservation program is not governed solely by the usual theoretical computation of present value of future (monetary) returns, in line with some assumed "rate of time preference." In addition to monetary returns the price which society can afford to pay for conservation also depends on social values which a society of assumed perpetuity must consider, and the extent to which the real cost of conservation can be met by using labor and other productive power that otherwise might be wasted through nonuse.

In order to do the latter most effectively, it would be necessary to finance conservation on a budget principle which would definitely provide for alternate periods of surplus and deficit financing in conjunction with years of relative prosperity and depression. This in turn would require that conservation work be made a part, perhaps the main part, of a systematic rural works program. This would not only contribute to the conservation of agricultural resources, but also to a better rural-urban economic balance.

In Later Issues

ARTICLES in this issue by Dr. Eric Englund and Dr. T. J. Woofter, Jr., furnish a background for two forthcoming articles. One is by Raymond C. Smith, chief program analyst in the office of the Chief of the Bureau of Agricultural Economics, who surveys the whole field of rural welfare and suggests remedies based on plans for a rural works program.

The other is by William F. Watkins, agronomist and principal soil conservationist in the Bureau of Agricultural Economics. He examines available material on the extent of conservation practices on individual farms and in national terms in order to appraise the extent of conservation and measures needed to achieve desirable goals in the work.

Helen Hill Miller, political scientist and senior agricultural writer in B. A. E., draws upon her wide study of subsistence farming and practical farming experience for an analysis of several contemporary aspects of farm living.

Rural Planning for More Workers

by T. J. WOOFTER, JR.

OUR POTENTIAL working population, aged 18 to 65 years, is now increasing at the rate of more than a million persons a year; in a period of minimum opportunity the United States is having the maximum addition to its labor force.

This rate will slacken gradually, but the actual number will continue to grow for some years. This situation challenges the best thought and efforts of those responsible for the policies and programs designed to guide the United States back to prosperity. The return of predepression employment levels will not be enough; in 1937 we attained industrial employment levels of 1929, but millions were still unemployed, chiefly because of the expansion in population.

The size of the increase is in itself a problem that contributes heavily to unemployment and complicates other social adjustments. Its distribution, too, aggravates the problem: The most rapid increases are from farm families. In the next 20 years, only 3 million of the 14½ million increase in the number of persons of working age will come from families now in cities, 4 million will come from families now in villages, and more than 7 million from families now on farms—more than half from farms, and more than three-fourths from rural territory. Within the farm population, the greatest expansion is in the poor land areas.

The most rapid increases are in the Lake States, Utah, the Great Plains, Appalachian-Ozarks, Cotton South, and Southwest. There is a close correlation between low agricultural income and high population increase. Given 30 years with no outward migration, the farm population of the poorest agricultural counties would double.

Economic Factors Complicate the Problem

Economic tendencies add to the problem, among them the partial loss of European markets and the probable course of export demand in the event of a long war. The Secretary of Agriculture has said that the shrinkage of European exports since the 1920's equals the normal production of some 30 million acres of land.

Improved practices have also greatly reduced the man-hour requirements in the principal crops; tractor sales reached a peak of 220,000 in 1937; between 1910 and 1930 the labor required to produce an acre of cotton declined by one-fourth and the labor needed on an acre of corn declined by about a fifth.

Narrowed demand and increased efficiency mean that we can now grow enough for normal demands with about 1,500,000 fewer workers in agriculture than in 1929. We face two conflicting trends: A growing population that needs wider opportunities, and a restrictive demand for manpower in agriculture.

Changing Ideas of the Type of Our Democracy

Writings about agricultural and population policies indicate that program makers approach the dilemma with certain assumptions that should be carefully examined, not necessarily to imply disagreement or agreement, but to indicate the difficulties in reaching unanimity about the goals of planning.

The first assumption is that we shall go forward under democratic institutions. There is no marked, effective trend to the contrary in the thinking of this country, but it is evident that our ideas regarding the type of democracy necessary for efficiently accomplishing social change are undergoing profound modifications away from *laissez faire* theories and away from an extreme State's-rights position of the 1920's toward more positive governmental action and toward regional and national coordination of effort in fields that transcend State boundaries.

It has become apparent recently that this country will tolerate controls as long as they are instituted and administered by the democratic process and as long as their intent is to promote general welfare.

An American Standard of Living and Security

Another assumption is that the system evolved should assure every willing and able breadwinner an American standard of living while he works and security when he cannot work. It should give children as nearly equal opportunities as possible to grow without handicaps of family poverty or inadequate community institutions.

This assumption, in the abstract, will not be seriously challenged, but there is some vagueness about the exact nature of this American standard of living. The concept is usually approached in terms of averages. With the distribution of incomes concentrated toward the bottom, we sometimes forget that more families live below this average level than above it. In 1929, one-fourth of the farmers had gross incomes of less than $600, and net incomes, including production for home use, of approximately $400. As these farmers work 2,000 or 2,500 hours a year, this amount is far below the minimum hour wage of 30 cents originally set for industrial workers.

Will Present Patterns Be Followed?

Do we then propose to define this American living standard in terms of averages or in terms of distributions? Do we propose to attain it by setting minima below which we do not wish families to live, or do we propose to raise the distribution all along the line? Do we propose to attain it simply by increasing the total national income without attention to its distribution?

A third assumption is that the present patterns generally will be followed. That is to say, we shall go forward not only under democratic institutions but along lines essentially similar to the present ones.

In agriculture, this means that it is widely assumed that the present patterns in size of farm, concentration on commercial crops, unrestricted land use, ability to exploit the land and speculate in it, and so forth, will be adhered to. It would seem, however, that our equanimity would be more disturbed if it were fully realized that this pattern freezes the expansion of agriculture, shuts out a large part of the oncoming generation, reduces the status of many farmers to that of landless tenants or laborers, encourages vicious cycles of inflated values, and puts a premium on practices leading to ruinous loss of soil fertility.

Another assumption is that many disadvantaged persons are down in the scale because of hereditary defect, laziness, or general indifference. The fallacy is apparent to anyone who has had social experience. Farmers may lose a crop because of the loss of a work animal. A drought may result in bankruptcy. Some persons may have missed opportunities because of parental poverty or inadequate local schools. This means a handicap in farm management. Many farmers fail simply because they are ill. Other factors far outweigh hereditary or temperamental defects as causes of distress; preventive measures should include the control of adverse social and economic environments.

Toward Urbanization, or Back to the Farm

When we attempt to plan a way out, we find several questions. Should the balance of population be tipped further toward urbanization, or the reverse? For a century up to 1930, the proportion of the working population in agriculture declined.

By 1930 only about one-fifth of our gainful workers were engaged in agriculture; in England, the proportion had gone down to one-tenth. England is worried about its self-sufficiency and, during the early 1930's, tried by subsidies to promote a back-to-the-land movement, but with small success up to 1938. Should the trend away from agriculture become much more pronounced in the United States we might have the same situation.

Increasing technical efficiency means that this Nation, with its present demand, could produce sufficient farm products with somewhat less than 20 percent of the number of workers now engaged in agriculture.

But evidence recently developed in consumer-purchase studies and various surveys of consumption by families on relief show that a different distribution of income—an increase in purchasing power of the lower third of the population—would tremendously increase the demands for foods and fibers. Any restoration of purchasing power in Europe would have a similar effect.

Part-time Farming and Rural Industries

Even if we contend that ultimately the proportion of workers in agriculture must decline, we cannot shrug aside the immediate situation by saying that industry should absorb the excess population. Equally futile is the thought that industrial unemployment might be ended by putting all the urban unemployed on the land.

Between a policy of further urbanization and stopping the trend away from agricultural employment is the encouragement of part-time farming and the development of scattered rural industries. In the past 20 years hundreds of thousands of agriculturists have depended on off-the-farm employment for part of their living.

The development of nonfarm sources of income for farm families undoubtedly merits full exploration. It is capable of some expansion but, if we face realistically the trends of the past 15 years, we are not encouraged to hope for a basic revolution in the economy by this process.

Shortcomings of Rural Employment Programs

Because industry has not been sufficiently decentralized to provide nonfarm income for large areas, the expedient of supplying such income through a public works program has been followed. It appears that as long as the excess of new workers is not absorbed by either agriculture or industry, public employment is necessary to maintain the purchasing power and the morale of idle workers.

There have been two shortcomings of rural employment programs to date: Short-range public employment programs cannot be coherently planned but must proceed on a fiscal-year basis without continuity, and the lack of skills makes it difficult to complete any kind of construction work for the farm population except ditches, roads, dams, and the like.

A long-range public employment program would envisage a more extensive use of idle manpower in conserving natural resources and providing rural services like schools, libraries, public health, recreation, and public welfare.

Self-Reliance in Agriculture

The lag involved in the industrial absorption of excess rural population and the slowness of expansion of part-time farming means that, over at least a decade, agriculture must be geared to care for the maximum number, even if some of the devices by which this is accomplished are temporary stopgaps.

Agriculture must put its own house in order, without too much reliance on industry to absorb the unneeded farm population. This, too, involves certain questions.

Chemurgy, the chemical inventions that will increase the use of agricultural products, has possibilities, but these are unpredictable. Furthermore, any increase in demand for manpower in connection with the development of new products possibly will be offset by technological inventions that will increase efficiency and reduce labor requirements in other crops.

Another problem is that of large-scale versus family-sized farming. Left unhindered, with the advance in technology, the normal economic forces would tend to develop more and more large mechanized farms that require a considerable outlay of capital on the part of the operator and that are tilled largely by hired laborers. Some observers maintain that this is economically the most efficient method of organization, from the viewpoint of commercial production of commodities.

But we should question whether there are social losses that offset economic gains. Even from the economic standpoint, when we approach the question from the aspect of the farm family rather than of the commodity, it is doubtful whether the family that grows wheat or cotton exclusively and buys other foods is better off than the family that grows some wheat and some cotton, and a considerable part of its own food requisites.

From the viewpoint of society as a whole, there can be little doubt that large-scale mechanized holdings create a tenant and migratory laborer group that receives a disproportionately small part of the agricultural income and tends to create relief problems in time of stress.

Cooperative Devices for Family Sized Farms

A middle ground between large-scale and family sized farms lies in the development of family sized units bound together with cooperative devices. It should not be inferred that it is desirable to collectivize our farms.

Pride of ownership is deeply ingrained in American farmers; but cooperative ownership of bulls, boars, and heavy machinery, and of community facilities for storing, processing, purchasing, and selling, can bring to the family sized farm many of the advantages of large-scale operations without loss of individual initiative.

Foreign Trade, Subsidies, and Tariff

Another aspect of the problem has to do with foreign trade and economic self-sufficiency. The revival of export trade in Europe would probably involve the extension of credits; our experience in building an export trade on credit during the 1920's should be a warning in this regard.

An alternative would be a drastic lowering of tariffs, and this would meet with vigorous resistance. A third measure, export subsidies, also resembles philanthropy to European consumers, the cost of the gift being removed from the shoulders of farmers by imposing taxation on other segments of the economy.

Our efforts to distribute agricultural surpluses to needy families through the Federal Surplus Commodities Corporation represent a developing technique for redistribution in this country.

Bound up with the choice of exports versus self-sufficiency and large-scale versus small-scale farming is the choice of the relative emphasis to be placed on commercial agriculture and on live-at-home balanced general farming. Fifty percent of the American farmers in 1930 produced 90 percent of the commercial crops; the others sold only 10 percent of the commercial crops, and depended on production for home use for the remainder of their income.

The economics of the situation would point to more efficient commodity production by regional specialization on crops for which the regions have differential advantages, were it not for the fact that in such an economy the producer must depend on other sections for his food and must, accordingly, pay the profits of processing, handling, and shipping this food to his market.

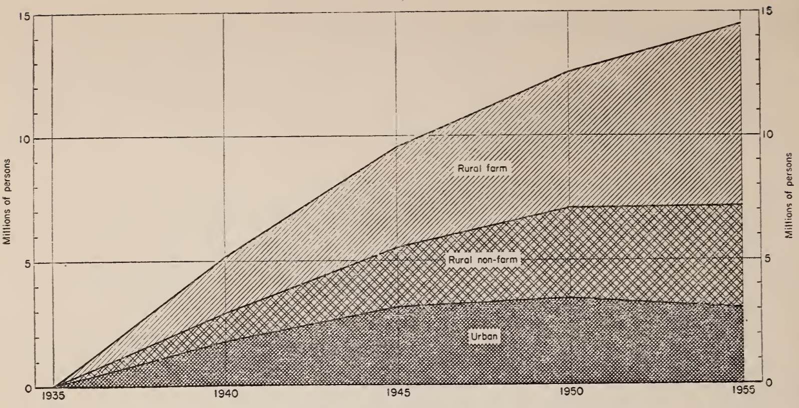
Likewise, exclusive concentration on a single money crop places the income of the producer wholly at the mercy of price fluctuations and furnishes no cushion against depression.

The most significant fact in a recent study of Southern plantations was that while the income of the landlord increased almost directly with the proportion of his crop acreage in cotton and tobacco, the income of the tenant increased almost directly with the amount of his production for home use.

Births and Immigration

We have examined briefly the devices for adapting the use of resources to the population; in an examination of policies of adapting population to resources, we must consider factors of birth control and the restriction of immigration.

In view of the facts of population pressure, it would seem logical to advocate a restrictive population policy, but one should remember that



CUMULATIVE INCREASES IN POPULATION 18 TO 65 YEARS OF AGE
1935 - 1955

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the effects of such courses are apparent on the labor market only 18 or 20 years after their adoption.

If one projects the present working population forward to 1955 and assumes no net immigration, he sees that by that date the increase in new workers will be sluggish; by 1955, city families will mature too few workers for replacement, and families now on farms will mature a number sufficient to increase the total national supply of working age adults by about 400,000 a year.

If living standards remain the same, this will mean fewer new families each successive year, a declining demand for new houses, a risky situation for new investment in many types of permanent improvements, a stationary output for products of inelastic demand, and a consequent stabilization of production in these fields. In other words, by 1955, on the basis of children already born, the Nation will begin to feel the depressing effects of the past decline in the birth rate. While the Nation now feels sharply the pressure of excess producers, it is probable that during dull periods of the late 1950's the Nation will be acutely conscious of a deficit in consumers, or at least the failure of the consumer market to expand unless the level of consumption can be greatly raised.

These are among the many puzzling problems that confront the makers of agricultural policy. Constructive work is being done to meet them, but much effort is in the nature of palliatives of maladjustment rather than preventives, and on a scale too narrow to meet the whole problem.

Rational planning must supplant emergency psychosis.

Citizens Help Plan and Operate Action Programs

by CARLETON R. BALL

FROM a seeds-and-statistics agency, the Department of Agriculture has developed to include far-flung activities like land-use planning, conservation, surplus commodity disposal, tenant rehabilitation, and crop production credit. Some persons believe that this growth is an example of the centralization of authority.

With reservations, it is that. But the nature of its scope merits dispassionate inquiry and offers an insight into an aspect of political science. Whether the intent toward centralization comes from above or below and whether there are counterbalances, are of basic importance.

There are decentralizing forces in the cooperation of State and local governments with Washington and in the participation of private citizens in department programs. More than 890,000 citizens help plan and operate 9 rural action programs.

Besides, more than 515,000 other volunteers report on crops and livestock, wildlife, and weather. Millions of farm families are aided by the various programs. The Extension Service, for example, influenced substantial improvements by some 4,635,000 farm families in 1938.

Let us investigate further these two aspects of several programs: The cooperation among the levels of government and the extent of participation of private citizens.

Local Committees in Agricultural Adjustment

The action programs of the Agricultural Adjustment Administration operate through 3,021 county agricultural associations, to which nearly 6 million farmers belong.

Community committees, which numbered 24,056 under the 1939 program, prepare, check, and approve program forms and documents, recommend acreage allotments and soil-building goals for farms, assist in checking performance, and cooperate in educational activities. Generally speaking, these efforts are reviewed and supervised by county committees. Members of community and county committees are paid $2.50 to $5.50 for each day of active service. For community committeemen, this amounts to about 12 days a year. Each county committeeman averaged 65 days of service in the 1938 program.

State committees, with three to five farmer members and the State director of extension, review recommendations of county committees, recommend special county acreage allotments, supervise performance, consider appeals, advise on general State policy, and assist in developing newly adopted programs, among other duties.

Land-Use Planning Committees

Land-use planning developed from the realization that programs for adjustment, conservation, and financial assistance often overlapped and brought two problems: How to make any one national program meet national objectives and yet serve the needs of diverse communities, and how to unify and coordinate the activities into essentially one program when they touch the individual farm. It became evident that national needs required that national planning begin at the top and work down and that local needs required that planning begin on the farm and spread outward and upward.

In July 1938 committees of the Department and the Association of Land-Grant Colleges formulated an agreement which provided that the Department be responsible for the over-all administration of action programs and that both Federal and State agencies cooperate in developing land-use study and plans as a basis for correlating all programs. There were established State land-use planning committees—comprising representatives of Federal and State agencies and several qualified farm men and women—and county land-use planning committees including representatives of Federal and State agencies concerned with different phases of land-use, and farm men and women. Finally, community committees of representative men and women from the farms were created to aid the county committees on local problems.

About 1,200 counties in 48 States entered on this county planning program in 1939–40. In some counties, about 200 farm men and women have been enlisted for service in county and community groups, but the average probably is about 60 in each county, or an estimated total of approximately 72,000. It seems likely that fully 500,000 men and women may participate in this fundamental action program when it is completely organized in some 2,500 counties.

Volunteer Leaders in Agricultural Extension Education

The Nation-wide Federal-State cooperative program for agricultural extension education, under Federal and State administrative and advisory staffs, enlists extension staffs including some 6,500 county agricultural agents, home demonstration agents, 4–H Club agents, and their assistants. Their work is done through office calls, telephone conferences, farm visits, meetings, demonstrations, letters, exhibits, bulletins, and many other activities.

An important factor is the training of many volunteer and unpaid local leaders, adults, and youths, as demonstrators, teachers, discussion leaders, and organizers to help present subject matter to local groups, counsel with the extension staff in analyzing conditions and needs, and in planning the yearly program, and to plan activities like farm and farm-home demonstrations, educational tours, and exhibits.

The steady increase in numbers of volunteer leaders from 432,400 in 1933 to 586,600 in 1938 is significant.

Each leader devotes an estimated average of 10 to 12 days annually to the work. In 1938, this represented the equivalent of the full-time service of approximately 20,000 persons, or more than three times the number of paid county extension workers.

Farmer Associations for Farm Credit Purposes

The Farm Credit Administration supervises a Nation-wide system of agricultural credit units empowered to make long-time and short-time agricultural loans to farmers, chiefly through farmer associations (national farm-loan associations and production credit associations) and to cooperatives.

Farmers own the stock of national farm-loan associations which, in turn, own substantial amounts of stock in the Federal land banks (through their national farm-loan associations), in the banks for cooperatives (through their farmer cooperatives), and in the production credit associations (through their membership therein). Farmers thus have a real part in the affairs of these credit enterprises.

The Federal land banks make long-term mortgage loans, chiefly through organized groups of farmers called national farm-loan associations, for the purchase, equipment, improvement, or operation of farm lands or to refund previous indebtedness thereon. Of these associations, 3,722 were operating on December 31, 1939, each with a board of at least 5 directors selected by the members at the annual stockholders' meeting, making a minimum total of 18,610 such members. The directors receive no compensation except for official expenses. On December 31, 1939, national farm-loan associations held capital stock in the 12 Federal land banks amounting to $107,786,870. The national farm-loan associations elect 1 of the 7 members of the district Farm Credit Board, each association casting 1 vote, and a second member is chosen by the Governor of the Farm Credit Administration from the 3 nominees receiving the highest number of votes in an election conducted by all associations in the district.

The board of directors of each national farm-loan association annually elects a loan committee of three members, with at least two alternates, to consider applications for loans. The loan committee's approval must be unanimous. In general, a committee member receives a small fee for each application reviewed but no other remuneration.

The 3,820 annual meetings of association stockholders in 1939 were attended by 183,169 persons, of whom 57 percent were association members.

On December 31, 1939, production credit loans were being made through 528 production credit associations of farmers, organized and supervised by a production credit corporation in each of the 12 farm-credit districts, and chartered by the Governor of the Farm Credit Administration. Members of each association elect either 5 or 7 directors, a total of approximately 2,750 directors. Each board selects an executive committee of 2 of its members and the secretary-treasurer of the association to act as a loan committee. The production-credit associations elect 1 of the 7 members of the district Farm Credit Board, each association casting 1 vote. Loans are made for general agricultural purposes.

On December 31, 1939, there were 1,634 farmers' cooperatives borrowing from the 13 banks for cooperatives. Each cooperative has a board of directors of 5 or more members, making a total of about 11,438 directors.

Farmer Committees of the Farm Security Administration

The Farm Security Administration helps needy farm families to become permanently self-supporting. It has three major activities: Financial rehabilitation of low-income farm families, the tenant farm-purchase program, and management of the 161 different homestead projects of the former Resettlement Administration. Another activity is the construction and operation of camps for migrant farm workers.

Two groups of citizen committees serve in the rehabilitation program. The committees on farm-debt adjustment are volunteer local citizens, appointed by F. S. A., which acts merely as an intermediary in bringing the debtor farmer and his creditors together with the local committee to adjust what might be otherwise a hopeless debt situation. In 1939 there were 2,911 such committees, with 11,529 members.

Local groups also pass on applications for rehabilitation loans. These committees are selected informally by field officials. It is estimated that approximately 10,000 persons serve in this way.

The tenant farm-purchase program is confined to certain counties recommended by State Farm Security Advisory committees whose members are guided by factors like farm population, prevalence of tenancy, and the availability of satisfactory farms at reasonable prices. These 48 State committees have 9 members each, a total of 432 members. In 1939 there were 1,289 county advisory committees, with 3,867 members, who consider applications for farm-purchase loans and certify each farm approved for purchase by a selected tenant.

Each of the 161 homestead projects has an operating committee of at least 3 members. Most of them have many more. If an average of 5 members each is assumed, there is a total of 805 committeemen.

Each of the 15 camps for migrant workers has a camp council, democratically elected, which makes and enforces the rules of the camp community, with supervision by an F. S. A. paid manager. The camps have a capacity of 200 to 300 families, and, as 1 councilor is elected from approximately each 30 families, the numbers vary from about 6 to 10 per camp. Assuming an average of 8, the total would be 120 councilors. Thirty-one camps are planned.

The number of citizens participating in activities of the Farm Security Administration approximates 26,753. There is a considerable but undetermined duplication in this figure.

District Advisory Boards for the Grazing Service

The Grazing Service of the Department of the Interior administers Federal Grazing Districts under the Taylor Grazing Act of 1934, as amended in 1936 and 1939, which permits conservation and grazing control on 142,000,000 acres of vacant, unreserved, unappropriated public land.

The act provides for a local district advisory board in each district, elected by those with licenses and permits and subsequently appointed by the Secretary of the Interior. The advisors give advice and recommendations about carrying capacity, applications for use (except their own), rules of fair range practice, allotments of range, applications for construction or maintenance of improvements, recommendations of local associations of stockmen, and similar matters.

In December 1939 there were 53 grazing districts containing about 134,000,000 acres in 10 Western States (all except Washington). The 53 advisory boards, having 5 to 12 members, exclusive of a wildlife representative provided for in each district, have a total of 547 members.

Borrower-Association Directors, R. E. A.

The Rural Electrification Administration, created in 1935, was transferred to the Department of Agriculture on July 1, 1939. It makes loans for building rural electric-distribution systems, which must be amortized within 25 years and must be self-liquidating within the period of the loan. It also makes loans for financing electric wiring and the purchase and installation of electrical and plumbing equipment.

Loans may be made to persons, corporations, States or their subdivisions, municipalities, people's utility districts, and cooperative, nonprofit, or limited dividend associations, with preference to the public agencies and cooperatives.

At the end of 1939, there were 688 such borrowers, of which 89 percent were cooperatives. The other borrowers were 1 State, 1 county, numerous municipalities, 34 public power districts (in Nebraska, Nevada, and Washington), and about 25 private power companies.

The 89 percent of cooperatives among the 688 borrowers would represent 614 such organizations. They have boards of directors, each averaging about 8 members, or a total of about 4,900. Ordinarily, the board members are elected on a geographic basis.

The directors establish the policies of the cooperatives or organizations they represent, enter into contracts with outside agencies, pass on proposed expenditures, and review actions taken and programs in operation. They deal with the R. E. A. in negotiating loans and in their interest payments and gradual amortization.

In many cases cooperative associations have various committees of five or more members who cooperate with the R. E. A. in specific matters. Many cooperatives have committees on education and on the utilization of electricity.

Supervisors of Soil Conservation Districts

One of the chief avenues for citizen participation in soil-conservation programs is through the formation and administration of soil-conservation districts. These may be organized by farmers in States having appropriate enabling laws, now in effect in 36 States. These provide for a State soil conservation committee of 3 to 5 State officers, such as the director of the State extension service, the director of the State agricultural experiment station, State conservation commissioner, State commissioner of agriculture, a representative of the State planning board, or other officials.

These committees administer procedures in the creation of districts, assist the district supervisors, encourage the organization of needed districts, facilitate interchange of advice and experience between districts, and help coordinate the programs of the several districts in the State. Each district, however, is an independent subdivision, not subject to the State soil conservation committee or any Federal or State agency.

The governing body of the district consists of five supervisors, three elected by the farmers and two (usually farmers) appointed by the State committee, each for 3 years. Supervisors may receive subsistence and travel expenses necessary to discharge their duties.

They may hire a staff and may obtain the cooperation of State and Federal agencies in their program, conduct research and demonstration projects, carry out prevention and control measures, contract with farmers and give them financial and other assistance, acquire necessary lands or properties for retirement from cultivation or other purposes, make available any machinery and equipment needed for control operations, and develop land-use plans and suggest them to land occupiers.

On February 15, 1940, a total of 568 petitions requesting the creation of districts had been filed in 33 States. Hearings had been held on 491 of these at 971 different locations. To date, 387 districts have been declared necessary and feasible by the State committees, and 32 petitions have been denied. Of the 387 districts, 234 with an area of nearly 128 million acres (or an average area of more than 850 square miles), have received certificates of organization. In 223 districts, supervisors have been elected and appointed; 171 districts, having 5 supervisors each, have entered into cooperative arrangements with the Department of Agriculture for aid in conducting their programs.

Committees and Demonstration Farmers in the T. V. A. Program

The Tennessee Valley Authority is authorized by Congress to undertake measures for improving the quality of plant-food materials and for cheapening their cost. On the advice of farmer organizations and State and Federal soil and crop specialists, the Authority has devoted most of its effort to the production of concentrated forms of phosphates.

The act requires that any fertilizer materials produced shall be widely tested by experiment stations, farmers, and associations of farmers, and provides that the Authority shall undertake to control erosion in the Tennessee Valley area by means of fertilizers, or otherwise, to protect the land from physical injury and the reservoirs from silting.

These two requirements result in large-scale activities on farms, all of which are conducted by the State colleges of agriculture in the seven Valley States in cooperation with the Authority.

In order to test and demonstrate the effect of the concentrated phosphates, the colleges have enlisted the cooperation of many county and community committees and farmers.

The community test-demonstration farmers, of whom there usually is one in any given community, agree with the community and county committee and the State college extension service to readjust their cropping systems where necessary for 5 years or more, to carry out fertilizer and other practices, to keep complete records, make full reports, and to open their farms to inspection tours by the community farmers at desired intervals. In return for this extra labor and risk, the Authority furnishes to the test-demonstration farmer, through the county committee, sufficient phosphate fertilizer to make the readjusted program effective. The farmer pays the freight and handling charges and also furnishes whatever lime and fertilizers are necessary to make the phosphate effective.

The community committees, chosen by the farmers, select the community test-demonstration farm and work with the college representatives and the farmer in mapping its soils, in readjusting its crop and livestock practices if necessary, and in supervising the test demonstration. The county committee, with the college representatives, approves the selection of community farms; requisitions, receives, pays the freight upon, and distributes to the test-demonstration farmers the shipments of phosphate, and collects the prorated freight charges from them.

The totals of committee members and test-demonstration farmers, in 1939, were:

	Number
Community test-demonstration committeemen	1,920
County test-demonstration committeemen	1,405
Total	3,325
Community test-demonstration farmers:	
In 7 Valley States	10,734
In non-Valley States	2,066
Total	12,800
Area test-demonstration farmers	12,910
Grand total	29,035

Summary of Assisting Citizens

Name of Citizen Groups	*Members*
AAA: Local committees	135,591
County land-use committees	72,000
Extension Service: Volunteer program leaders	586,600
FCA: Association directors and committees	36,574
FSA: Local committees	26,753
Grazing Service: District advisory boards	547
REA: Association directors	4,900
Soil conservation district supervisors	855
Tennessee Valley committees and test-demonstrators	29,035
Total	892,855

Volunteer Cooperative Observers and Reporters

Several units of government have the cooperation of many citizens who observe, record, and transmit desired data basic to agricultural adjustment and conservation and therefore to action programs. In some cases, these observations must be made daily at specified hours, thus requiring a high degree of dependability.

Three Federal agencies obtain much important information from such volunteers, nearly all of whom are unpaid. These agencies are the Division of Agricultural Statistics of the Agricultural Marketing Service, and the Weather Bureau, both in the Department of Agriculture, and the Bureau of Biological Survey, now of the Department of the Interior.

There are 514,931 such volunteers, including 500,000 crop and livestock reporters, 3,366 bird-migration observers and banders, and 11,565 weather-bureau observers.

The work of the crop and livestock reporters includes the furnishing of estimates of crop conditions, crop acreage (including intentions to plant), crop yields, and crop production; farm value of products, gross income, cash income reports on field crops, cotton, fruit crops, truck, and canning crops, livestock, dairy products, and poultry and eggs; farm price reports, including annual prices on crops and livestock, monthly prices of crops and livestock sold, and quarterly prices of 175 articles that are bought by farmers.

The Bureau of Biological Survey is concerned with the conservation and development of the animal and bird resources of the Nation, and requires periodic knowledge of the existing numbers of the different species of wildlife, especially after periods of unfavorable climatic conditions or man-made destruction of breeding sites or feeding areas. Observers report on arrivals, numbers, and departures of all observed species in both spring and fall migrations, and on the relative abundance of breeding individuals. Special observers of migratory waterfowl make similar records and reports on ducks and geese on the same flyways in North America. One observer recently completed 61 years of continuous service.

One important method of determining how far, to where, and in what periods of time, migrating birds may travel, is through the use of numbered metal bands attached to the legs of birds. Special Federal and State permits are issued to qualified persons willing to perform this service and keep the necessary records. The bands carry a request that anyone finding a bird with band attached shall report the location and date of finding and the band number to the Survey. In 1939, 436,785 birds were banded. Approximately 27,000 returns were received. Since 1920 a total of 3,284,142 birds have been banded and 202,913 returns received.

For many decades the Weather Bureau of the Department of Agriculture has enlisted thousands of volunteer weather observers and reporters of daily and weekly weather data.

A British Experiment in Cooperative Farming

by MURRAY R. BENEDICT

BRITAIN, like the United States, has had to face the problems created by smokeless stacks and idle men. With the decline of her coal and iron industries, thousands went on the dole and stayed there. Young families grew up not knowing what it was to have wage-earning members in their groups. Men lost their skills, grew old on relief, and sank to new depths of physical and mental incompetence. These conditions were most prevalent in areas engaged primarily in the heavy industries.

In 1934 the Government undertook to improve these conditions by passing the Special Areas (Development and Improvement) Act, that initiated programs with numerous ramifications. The cooperative farming ventures discussed here constitute only a minor part of the whole program and, in fact, are not the major phase even of the land settlement activities. The plan of operation and the experience hitherto, however, have significant interest in view of various American undertakings of a somewhat similar type.

Activities looking to the provision of employment for idle workers in these "depressed" or "special" areas have included the channeling of Government orders to their industries, the erection of new factories to encourage light industries, public-works projects, special-training programs, encouragements to migration, and many others.

Putting Idle Workers On the Land

Along with these measures, however, there has been a carefully planned and rather extensive program for establishing unemployed workers on the land. Its major phases have centered around the small tenant holding (with provisions for preliminary training and testing of applicants), the workers' garden program, and similar undertakings. The Welsh Land Settlement Association has, however, started a few rather large-scale cooperative farms. One of these is the Boverton Castle Cooperative near Cardiff, another the Sealand Manor Cooperative near Chester, in the northeast corner of Wales. The two ventures are the best known and the farthest advanced.

Because of certain similarities to some of the Farm Security Administration projects in the United States it seems worthwhile to describe these, even though it is still too early for any dependable appraisal of their long-term prospects. Possibly even more interesting than their similarities to the American enterprises are the various dissimilarities arising from differences in concept, environment, temperaments, and experience of workers and administrators.

In the first place, the British scheme is less directly a governmental undertaking than the American. The Land Settlement Association is a semiprivate agency formed as a nonprofit corporation. To this agency grants have been provided by the Development Commissioners mostly on a pound-for-pound basis. The program is administered mainly by agencies that bear a relationship to the Government that is more like that of the American Red Cross than that of the F. S. A. The Government to some extent enters as a silent partner, through matching grants, and also provides a measure of administrative control. A considerable portion of the input of private funds came from the Carnegie United Kingdom Trustees.

68 Workers Replace 8 Men

The Boverton Castle Cooperative was formed April 1, 1937. Boverton Place farm, 652 acres near Llantwit Major, a few miles from Cardiff, Wales, was acquired and leased to the society for 24 years. Rental is calculated at 3 percent on the cost of acquisition and capital development. At the time the project was initiated, 60 acres were under the plow, the remainder having been used for many generations for the production of livestock.

It is one of the few large areas of relatively level land in the immediate vicinity of Cardiff, an industrial city of about 225,000. At the first annual meeting in March 1938, Capt. Geoffrey Crawshay, chairman of the Council of Management, was able to report that 620 acres were then under plow. Two years earlier the farm had provided employment for 8 men. By the time of his report it was furnishing regular work for 68 men and regular or casual employment for 16 sons and 18 daughters of settlers, as well as considerable work for casual employees from outside the cooperative.

It was estimated that wages earned previously on this farm would amount to perhaps £800 a year (roughly $3,760). During the 10 months covered by the report, £9,245 had been paid out in regular and casual wages (about $43,450). Produce had been sold to the value of nearly £20,000 ($94,000). The verified records showed a net profit for the first 10 months of £1,755 ($8,248). (Dollar figures are approximated to the exchange rate which prevailed at the time of the writer's visit, about $4.70 to the pound.) Of the net profit, £500 were placed in reserve and £125 set aside for income taxes. This left a little more than £1,130 ($5,311) to be divided among the members.

Records were not available for the succeeding year, but comments by the chairman of the Council of Management for the Welsh Land Settlement Society indicated continuous progress and satisfactory results.

Acreage under glass (mainly for tomato production) had been increased from 1½ acres to 3 acres. A substantial capacity in mushroom cellars had been developed. A small start had been made in poultry production. Crops, with one exception, had been good, and prices were well maintained. The strawberry crop on 70 acres was harmed by drouth and cold wet weather.

Modern Housing Amid Romantic Antiquity

Before undertaking more analysis of the project certain details concerning the physical facilities and methods of operation will be of interest. Some 70 houses in units of 2 to the structure have been erected. These are substantially built of brick. Each residence contains 5 rooms. Each has a garden plot. The houses are arranged around a central green that the residents are expected to improve as their community becomes more settled.

The area is rich in historical interest. Almost in the front door yard of the settlement are the ruins of Boverton Castle, girlhood home of the wife of King John, and his last stopping place in his flight from the throne.

The participating cooperators are not of agricultural background. They are former miners or industrial employees. They were purposely so chosen, and are not expected to know (at the beginning) how to farm. They work in groups under foremen and with the kind of organization to which they have been accustomed in industry. Each is paid a weekly wage of 36 shillings (about $8.50) plus allowances for overtime and a share in the bonus which may arise from profits. The wage is the rate officially fixed for farm workers by the local county wage board. In addition they receive a weekly free distribution of vegetables estimated to be worth 2s. 9d. (about $0.60). Other members of the family may work also, thus adding to the family income. Total average earnings in cash and kind were about $10.75 a week, not counting payments to wives and children.

Workers Have Little Voice in Management

Residents of the houses are charged 4 shillings a week as rental. This rate is fixed by the local agricultural wages committee and, like rentals on most farm workers' cottages throughout Britain, represents considerably less than an economic return on the investment in housing.

In all parts of England, Scotland, and Wales considerable subsidies are provided by the central government and by some of the county councils for construction and reconditioning of farm-workers' cottages.

Management and policies are held rather completely in the hands of the sponsoring agencies. The cooperators have an advisory committee but are not expected, at least for the present, to exercise many of the management functions. An effort is made, however, to have this committee settle internal personal problems, such as elimination of individuals regarded as detrimental to the group, and also to sponsor noneconomic activities of the community.

The scheme apparently does not contemplate even eventually the ownership of the land by the cooperators or the complete assumption of management functions by them. The development of social activities is regarded benevolently by the management, but the initiative is left to the cooperators. They have reconditioned an old stone building for parties, dances, and similar activities.

Good Homes, Good Work, Good Returns

What are the conclusions that may warrantably be drawn from the brief history of this interesting undertaking? Certainly it would be premature for anyone to hazard positive statements, but a few comments may be helpful in relating the limited experience there to some of our own related problems.

The project appears to have accomplished certain desirable things. It has provided some 70 families with comfortable, substantial homes in wholesome and attractive surroundings. It has given productive, healthful work to family heads and to members of their families. Thus far it has been surprisingly successful financially.

Can this relatively satisfactory record be maintained? Can the venture be duplicated elsewhere with similarly satisfactory results? These questions were raised with a prominent agricultural economist familiar with the area. His replies point out certain cautions that may need consideration in generalizing about ventures of this type. First he pointed out certain peculiarly favorable circumstances applying to this particular project which would be difficult, perhaps impossible to duplicate in other similar ventures. Among these were:

1. The land was one of the few really good pieces of plow land near Cardiff. It was fertile and ripe for such development under strictly private initiative but, because of the nature of its ownership, had been retained in livestock production probably long after it should, from a profit standpoint, have been turned to more intensive uses. In other words, it was a rather shrewd purchase whether for private or cooperative development.

2. For various reasons Cardiff had never had an important local supply of vegetables, but for generations had received supplies from truck-growing areas of England. Hence the Boverton Cooperators had at their door a large market in which they had peculiar advantages. This again is a condition not too easily duplicated in many areas, though there appears to be a growing market for British-grown vegetables almost all through the United Kingdom, partly as a result of

restrictive tariffs on supplies coming from southern Europe and partly because of a growing use of vegetables in the British diet.

3. The cooperative has been fortunate apparently in obtaining an able manager, who had experience with fairly large-scale farming and proved to be a shrewd buyer and a shrewd seller. The management is, of course, selected by the Welsh Land Settlement rather than by the group of cooperators.

The Sealand Manor Enterprise

The project at Sealand Manor is similar in many respects, but has had thus far a somewhat less encouraging experience. It was started at about the same time as the Boverton venture, but was apparently less happy in the selection both of management and membership. Also, the land chosen was of lower fertility than that at Boverton. Within the past year some changes have been made in the membership, management, and methods of compensation. This may correct a number of the early difficulties.

The Sealand Manor farm, slightly larger than that at Boverton, has about 800 acres in two parcels, rather than one. In June 1939, there were 78 families. The land lies slightly below sea level and had not been kept in a high state of tilth before the Land Settlement Society acquired it. Probably its natural fertility is not so good as that of the tract at Boverton.

There also was more difficulty in adjusting the cooperating workers to the program. After rather lengthy consideration, four of those considered unsuited to the organization were eliminated through action by the cooperators themselves. The management was also changed.

After some experimenting with various devices, much of the work was placed on a piece work basis and, in the opinion of the present management, this arrangement was more successful than the original weekly wage plan. Workers were making as much as 52 shillings per week, about 50 percent more than their previous wage. The manager stated that they were getting the work done as cheaply as before and with more satisfaction all around. There was apparently a feeling both among workers and management that some of the individuals were not willing to do their share in making the project a success. The shift to piece work apparently had eliminated most of this difficulty.

800 Acres Support 450 Persons

The project was employing all of the 78 cooperators and was using practically all available time of sons, daughters, and wives of the cooperators. Some casual help was also employed. About 450 persons were living on the place. The farm produces cabbages, potatoes, cauliflower, brussels sprouts, and similar crops. Little difficulty had been experienced in disposing of the produce. Crops generally seemed in good condition.

Conversations with some of the workers indicated a fair degree of satisfaction on their part, though an absence of the enthusiasm which apparently has marked the situation on the Boverton farm. Some men, whose children were all too small to take part in the work, said they were unable to earn enough to meet the extra expenses of the winter months. Some thought that farming methods might be changed to advantage, for example, the use of animal manures instead of commercial fertilizers, more production of such crops as oats, and so on.

It seems doubtful, however, that these men were sufficiently aware of the necessity for intensive production to be good judges of changes of this kind which might be desirable. One may expect, however, that as the settlers become more adjusted to their new environment, as the quality of the soil is built up, and as early mistakes are corrected, the results will become increasingly satisfactory.

Businessmen and Social Experiments

The use on both these projects of ex-industrial workers rather than ex-farmers puts a markedly different complexion on the problem from that which exists in most of the cooperative farming ventures in the United States. For workers having this industrial background the plan of operating in groups under head men seems not only appropriate but probably almost the only procedure that could be used.

Where American ex-farmers, with their background of individual work and real or assumed knowledge of how to perform farm tasks are so settled, there is reason to question whether such methods would not give rise to considerable opposition. This difference in background may also justify and in fact necessitate the larger degree of overhead control of the affairs of the group which seems to mark the British undertakings.

In this venture, as well as in many of the others in Britain, general management seems to have been placed rather more largely in the hands of business men than has been customary in recent years in the United States. One reason for this probably lies in the apparently greater willingness of experienced British businessmen to take part in social experimentation and public welfare activities. Interest in such ventures on the part of the business community appears to be much more widespread than in the United States.

One of the notable features of the various lines of attack on the British unemployment problem lies in the wide diversity in types of activity. There is apparently little rigidity in the pattern of procedure. Numerous kinds of undertakings are tried.

Emphasis seems to be upon the objectives rather than upon the method.

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The Migrants

How many farmers are there among the migrants now in California? How many of them have found farm work? How much do they earn? These are among the questions answered in this article, the fourth of a series about migrants in the Pacific coast area.

IV. Jobs on Farms in California

by VARDEN FULLER and SEYMOUR J. JANOW

CROP production in California requires an estimated 50,000 to 150,000 competent seasonal workers, besides regularly hired workers, and members of operators' families. A limited and at least temporary absorption of migrants into agriculture has occurred, not because of labor scarcity in the aggregate, but because of particular factors of labor demand and supply.

These circumstances make possible the spreading of a limited amount of employment over a large number of workers. This, in turn, leads to serious under-employment of those who are able more or less effectively to compete for the work.

Labor requirements on individual farms and within specialized areas are intense for relatively short periods. Before 1930 the demand for seasonal labor in the various specialized areas generally exceeded the resident labor supply, and, since the peak periods do not come simultaneously, seasonal workers have been able to increase their annual employment by moving about from one district to another. Some seasonal workers have been able to maintain permanent residences by working on different farms and in different crops within their locality.

Large numbers of workers per employer, short periods of employment, and the great proportion of the workers who before 1930 were not members of the community have conduced to highly impersonal relations between employers and workers. An out-of-State worker could therefore compete on almost equal terms with State residents for available jobs.

California agricultural labor groups always have been heterogeneous. For most seasonal workers, there has been no stable employment relation to a particular farm.

When fruit production and other intensive cultivation was developing during the 1860's and 1870's, Chinese immigrants made up the bulk of the casual and seasonal labor supply. After 1882, Chinese laborers were no longer permitted to immigrate, and until 1900 native whites were employed in increasing numbers. When employment conditions began to improve after 1900, Japanese and Hindu immigrants became the principal source of seasonal labor until toward the end of the decade when their immigration was stopped. From 1909 until the arrival of war prosperity in 1916, the conditions of the 1890's were again experienced and economic stagnation forced large numbers of native whites again into seasonal agricultural work. For the prosperous 1920's, Mexico and the Philippines were the chief sources of the seasonal agricultural labor supply.

The hiring of native whites during the 1930's is therefore not unprecedented. There are now these chief differences: Heretofore the native whites in seasonal agricultural work during depression periods have been mostly single men, whereas during the 1930's the workers have been primarily family groups. The single whites followed the migratory paths of the immigrant groups, but the white families are attempting to establish permanent homes.

With such a supply of labor, and the demand chiefly short-term, scattered, and concentrated among a few large-scale employers, distressed migrants from the South Plains States could compete with residents for the limited work. And even though employment opportunities in California have been circumscribed, they have been relatively attractive to persons whose economic opportunities elsewhere virtually had vanished.

The Proportion Engaged in Agriculture Has Declined

The Bureau of Agricultural Economics has estimated that approximately 190,000 persons moved from other States into 12 counties (Sutter, Yuba, Placer, Sacramento, San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and Kern) of the great interior valley of California after January 1930 and were still there in May 1939. A B.A.E. survey through the agency of the public schools enumerated 20,279 migrant families in these counties. Of these families, 38 percent reported that they were engaged in agriculture. Almost one-half reported that they had farmed before migrating to California.

Thus, two widespread beliefs—that the migration of the past decade has been almost entirely of an agricultural origin and that agriculture in California has absorbed the bulk of the migrants—are not supported by the findings of this survey.

The migration was less than one-half agricultural to begin with, and there has been a net shift from farming in connection with the migration. Since the above proportions represent predominantly agricultural areas, it is almost certain that, when the more highly industrialized areas are included in the analysis, the respective agricultural proportions for the State as a whole will be found to be even smaller.

Migrant family heads engaged in agriculture in California are occupied principally as farm laborers, whereas before migration they were principally farm operators.

Percentage of total migrant group who were—	Before migrating to California	In California (April 1939)
Farmers	28.4	7.8
Farm laborers	19.4	30.8
Total agricultural	47.8	38.6

Of the present farm laborers among the migrant group, 38 percent were formerly farm laborers and 36 percent formerly were farm operators; thus, approximately one-fourth of the migrants now working on farms previously were not engaged in agriculture at all.

The Cases of 1,000 Migrant Families in California

As a part of the broad study of recent migration to the Pacific coast, the Bureau of Agricultural Economics made a detailed study of 1,000 families now located near Los Angeles and in the Sacramento, San Joaquin, and Salinas Valleys.

These families were found living in new communities created by resettled migrants. Only those families were selected who had had some experience in agriculture, the minimum being at least 1 year of experience by one member of the family. Nearly all had been engaged in agriculture before going to California, but a few were included who had previously been engaged in nonagricultural industries and had been employed in farming since arrival.

Of the 1,000 families, 37 percent had come from Oklahoma, 16 percent from Texas, 9 percent from Arkansas, and 8 percent from Missouri. These four States contributed 70 percent; the rest were scattered principally throughout the southern, midwestern, and western States. Approximately 28 percent of the migrant families arrived in California in 1936 and 63 percent arrived between 1935 and 1937.

As to year of arrival, there is a significant difference between this 1,000-family group and those included in the school survey. The latter indicated substantial proportions of migration in years other than 1935–37, but the 1,000-family investigation showed a greater concentration in this 3-year period, which immediately followed severe drought in the South Plains States. This suggests that the 1,000-family sample group represents a relatively great proportion of distressed migration.

An Average Net Worth of $265

The extent of economic distress under which the families in this sample arrived in California can be judged by the fact that the average net value of their assets upon arrival was $265. Of this, $111 was in cash, $101 was in the value of car and trailer, and the remainder was in household goods and miscellaneous belongings.

This average is greatly raised by a few relatively well-fixed families; approximately one-half of the families had a net worth of less than $100 and three-fourths were below $400. It is thus evident that most of the families had to obtain manual employment immediately upon arrival.

Frequently the migrants to California have been accused of being shiftless, nomadic, and not interested in permanent employment or homes. The indications from the 1,000-family study were to the contrary.

It has been found that 11.3 years was the average period of residence in the State of origin—the last State in which the family lived at least 1 year before departure for California.

Moreover, that the migration was purposeful may be judged from the fact that there was little wandering about in the interval between departure from former State of residence and arrival in California; 85 percent of the families arrived in California within the calendar year in which they departed from their former homes. Within California, residence has also been rather highly stabilized.

Of the 1,000 families, more than one-half went directly to their present communities upon arrival in the State and have remained there since. This coincides with the experience of the families enumerated in the school survey in the 12 counties; one-half of that group also have lived in their present counties throughout their period of residence in the State.

The Typical Migrant Is Not a Wanderer

Clearly, the typical migrant included in these studies is not a nomadic wanderer, but one who purposefully left an inhospitable economic environment to seek a more favorable one. Whenever the term "migrant" is used in this connection, it should be interpreted as describing one who has changed his State of residence rather than a continuously migratory person or family.

Efforts to achieve a foothold in California have taken a number of different lines. Approximately 40 percent of the 1,000-family group have purchased real estate since arrival. The average contract price of the property purchased is $560. Cash improvements of $256 and labor improvements of $54 made subsequent to purchase have increased the present valuation to an average of $870. Since the average unpaid balance on the property and improvements in the spring of 1939 was $405, the average net equity at that time was $465. (These averages were determined on the basis of the families who actually purchased property, not all families in the sample.)

For the group as a whole, practically all savings since arrival in California have gone into property purchases and improvements. In some cases the effort to acquire and improve small properties has gone so far as to make serious inroads upon diet and needed medical attention. Most of the land purchased is useful only for building sites; not much can be used for gardening or farming. The typical purchase contract was made with less than $50 paid down, with the remainder, with interest at 6 percent, to be paid at the rate of $10 to $15 a month.

Another indication of intention to settle down is that approximately 65 percent of the migrant family heads have become registered voters in California. Most said they had migrated to California because they had been told there were opportunities for work at good wages. Only a few reported that they came because they had seen advertisements of jobs. The presence of friends and relatives in California also was given frequently as the reason for migration, more often than health, climate, or other related reasons.

Employment as Agricultural Laborers in 1938

As previously indicated, all of the 1,000-family group at some time had been engaged in agriculture—three-fourths had farmed immediately before departure for California. Most of them had some agricultural labor in 1938. Some, however, had been employed at other industries exclusively and some had not been employed at all. When the families are classified according to their *principal source of income* during the year, the result is as follows: (Complete income data were not obtained from all families, hence the total for this classification is 953.)

	Number	*Percent*
1. Agricultural labor	364	38
2. Labor in packing, canning, and processing of agricultural products	76	8
3. Labor in nonagricultural industries	214	23
4. Dependent principally upon public assistance	299	31
Total	953	100

Many of the families in groups 2 and 3 received small amounts of employment in agriculture. For the families in group 4, however, agricultural labor was the principal source of nonpublic-assistance income. The question therefore arises as to the minimum employment which should be required in classifying a family in the agricultural labor as against the public-assistance group. Within category 4, there are 93 families whose principal source of nonpublic-assistance income was agricultural labor and who earned at least $100 from agricultural employment. There are 69 other families who are in the same classification, except that they earned less than $100 from agricultural labor.

Table 1.—*Composition of average family incomes for 1938—Three groups of recently settle migrant families with some agricultural employment in California*

	Group I[a] (364 families)	Group IA[b] (93 families)	Group IB[c] (69 families)	All groups (526 families)
Employment:	*Percent*	*Percent*	*Percent*	*Percent*
Agriculture	75.5	30.3	8.9	61.5
Canning, packing, and processing agricultural products	5.0	1.5	.2	3.9
Nonagricultural industries	6.4	2.1	.3	5.1
Total industrial earnings	86.9	33.9	9.4	70.5
Total public assistance	12.5	65.8	90.1	29.0
Other income	.6	.3	.5	.5
Total income	100.0	100.0	100.0	100.0
Average income	$759.88	$645.78	$549.64	$712.13

[a] *Families with agricultural labor as main source of income.*

[b] *Families principally dependent on public assistance but with at least $100 in earnings from agricultural labor as principal nonpublic-assistance source.*

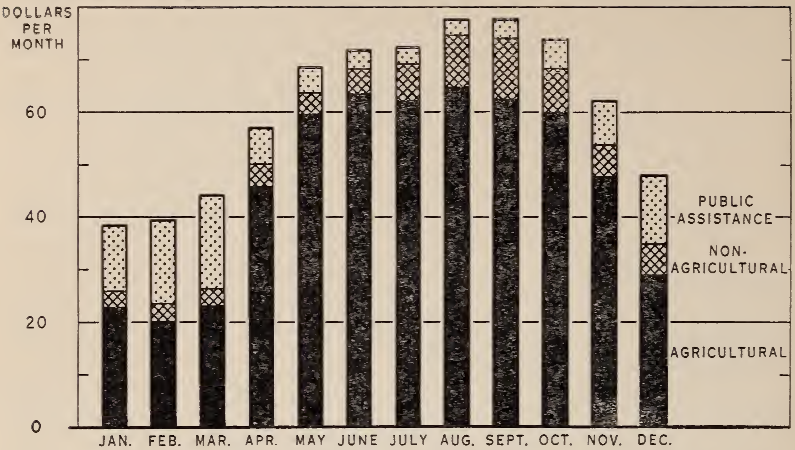
[c] *Same as group IA but with less than $100 from agricultural labor.*

These three possible classifications of agricultural laborers and their respective incomes are compared in table 1. Group I, representing families most successfully engaged in agricultural labor, made three-fourths of its income from this source, and received only one-eighth from public assistance. For the next grouping, those making at least $100 in agricultural labor, the average income falls from $760 to $646, of which 30 percent is from agricultural labor and 66 percent is from public assistance.

The average income of the final grouping, those earning less than $100 from agricultural labor, was $550, of which 90 percent was received from public assistance. When all of these groups are combined, the average income is found to be $712, of which more than 60 percent was earned from agricultural labor and less than 30 percent received from public assistance. The combined grouping, while not including all families in the sample who performed agricultural labor during the

AVERAGE ANNUAL FAMILY INCOME FOR 1938 BY MONTHS AND SOURCES

306 RECENTLY SETTLED AGRICULTURAL LABORER FAMILIES IN CALIFORNIA



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year, does include all for whom agricultural labor was the principal source of nonpublic-assistance income.

Subsequent analysis of employment and earnings will be based on the 364 families who may be considered as having experienced relative success in entering into the agricultural labor field.

Of the 364 families whose principal source of income was agricultural labor, only 15 percent made all of their income from this source. Only 33 percent were able to avoid public assistance entirely; the modal combination, as shown below, was agricultural labor plus public assistance:

	Percent
Agricultural labor only	15
Agricultural labor and other employment	18
Agricultural labor and public assistance	35
Agricultural labor, other employment and public assistance	32

Thus two-thirds of the group who were relatively successful in getting agricultural employment had to seek public assistance sometime during 1938, but the extent of dependence upon public assistance was relatively slight—only one-eighth of the average income for the group was received from this source.

One of the characteristics of seasonal employment is that several members of the family work whenever jobs are to be found. Sometimes no member of the family was working; sometimes several were employed. It was found that during the slack season almost one-half of the families had no member employed at any time during

January, February, and March. Even during the busy season, approximately one-tenth of the families had no employed member in June, July, August, and September. As jobs became more plentiful in the harvest season the average days of employment per worker rose but the number of workers per family increased more rapidly; from a low point of 0.7 persons employed during February and March, the average increased to 1.7 employed persons per family during September.

A person was counted as employed within each month if he received at least 1 day of employment; the extent of under-employment is to be seen in the fact that at no time during the year did the average days of employment per employed person rise as high as 19 days a month. This group of families received an average of 245 days of employment per family, and an average of 198 days per worker. Of the 198 days, 148 were in agriculture.

TABLE 2.—*Number of workers and man-days employment [a] per family during 1938*
306 recently settled farm labor families [b]

Month	Percent families with designated number of workers				Average number working[c]	Average man-days work per family	Average man-days of work per worker
	None working	1 working	2 working	3 working			
January	44.1	39.6	9.5	3.9	0.8	10.7	13.4
February	49.3	37.6	8.2	1.6	.7	9.0	12.9
March	48.3	39.2	8.5	.7	.7	9.6	13.7
April	23.5	55.2	14.7	4.3	1.1	18.8	17.1
May	13.4	59.5	18.3	3.6	1.3	23.6	18.2
June	11.1	57.2	20.9	5.6	1.4	25.7	18.4
July	11.8	56.5	19.6	6.5	1.4	26.4	18.9
August	11.8	52.6	21.9	6.5	1.5	27.4	18.3
September	9.5	49.7	22.5	6.9	1.7	29.6	17.4
October	13.4	47.0	24.5	6.9	1.5	26.9	17.9
November	21.9	43.8	20.9	7.8	1.3	22.7	17.5
December	36.6	40.2	14.7	5.5	1.0	14.5	14.5
Average	24.6	48.1	17.0	5.0	1.2	20.4	16.5

[a] *Excluding W. P. A., C. C. C., and N. Y. A., and including all gainful employment whether in agriculture or nonagricultural industries.*

[b] *58 of the 364 families are excluded because of insufficient data.*

[c] *Because of space limitations, figures are omitted showing the percentage of families with 4 and 5 workers.*

The 364 relatively successful families of farm laborers received more than 10 percent of their income from employment in nonagricultural industries. It is a matter of considerable interest to know whether this employment was received at such time during the year as to dovetail with the highly seasonal agricultural employment.

In the chart, average incomes are classified by months and by source. It is evident that there was no compensation in seasonality as between agricultural work and other employment. Actually, the two are highly correlated over the year. This is inescapable because a large part of the employment received outside of agriculture was in the canning, packing, and processing of agricultural commodities, and activity in these lines is closely geared to activity in the fields. The only dovetailing which takes place is in the receipt of public assistance which is adjusted contraseasonally with earnings and does to a limited degree compensate for the seasonality in earnings from employment.

Higher Living Costs Cut Into Earnings

Although the average income for this group of families in 1938 was $760, this average is materially affected by the influence of a few relatively large incomes. The median income was approximately $650. More than one-fifth earned less than $450, almost one-half earned less than $600, and only one-fourth earned more than $750. Compared directly with incomes of people similarly occupied in the States from which these migrant families came, these incomes appear to be very favorable. In terms of real income, the difference is not so great as it would seem, however. Besides the relatively higher living costs of California, there is the cost of seeking and traveling to work. In order effectively to pursue agricultural employment in many different types of crops and on many farms within the vicinity of an established residence, an automobile is practically indispensable. Its operating cost cuts deeply into the earnings.

A few of the agricultural laborer familes have been able to supplement their wages by producing and selling garden products and by miscellaneous activities like cutting and selling wood. Income from these sources was small, however. Small amounts of additional income were received in kind from employers and from the surplus commodities program. Many of these families have also received the benefits of free medical attention.

Progress of Families Resettled as Farm Laborers

The financial position of the 1,000 families was weak at the time of arrival in California. For the group as a whole, there has been little measurable financial progress during the period of residence in the State. Except for equities in real property, there has been no growth in net worth. Those resettled in certain localities have experienced more favorable employment opportunities and have advanced their financial position more noticeably than those located in others. There have also been wide differences among individual families in regard to their economic progress during their period of stay in California.

With real-estate equities included in an analysis of net worth change, the average increase for all families, regardless of whether they have purchased property or not, for their entire period of residence in California, is approximately $140. Moreover, average increase in net worth, including equities in property, is greater for those who have been relocated the longer.

The failure of the families of the 1,000-family group to demonstrate significant financial progress can be too harshly interpreted. These people are limited in occupational experience and in financial strength. They are, however, trying to establish themselves socially and economically in scores of new communities which are springing up throughout the State. These families are in a position, should a more favorable economic environment appear, to make rapid strides toward their own rehabilitation.

Economic Prospects for Those Relocated

Many factors must be reckoned with in appraising the economic future of those engaged in agricultural labor in California. First of all, of course, is the fact that the economic future of agricultural laborers is tied up inescapably with the present structure as well as the future of the whole industry. As the structure of farm sizes and degree of specialization in production are now, only approximately one-fourth of all agricultural laborers can be regularly employed on an annual basis. The remainder must seek short-term casual and seasonal jobs in many different crops and on many different farms.

If alternative opportunities in other industries should develop sufficiently to draw away the present agricultural laborer surplus, the situation for those remaining would be much improved. If a group just large enough to meet the maximum seasonal need were utilized efficiently throughout the year, the amount of employment per worker would be greatly increased.

Considerable mobility, from farm to farm and from crop to crop, would still be required, however. Should general economic activity rise to a point where labor was in great demand, nonagricultural enterprises might be established in the rural areas to utilize the labor time of agricultural workers during the slack season.[1]

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[1] *The authors wish to acknowledge their indebtedness to Davis McEntire, leader of the Division of Farm Population and Rural Welfare, Pacific Area, who initiated this project and under whose supervision it has been conducted; to Jean Claire Bowman, junior statistical clerk, Division of Land Economics, who supervised the statistical tabulations, and to Prof. Paul S. Taylor of the University of California for his helpful assistance and advice in initiating the study of the 1,000 families and for providing field enumerators from among his graduate students.*

The Community in County Planning

by DOUGLAS ENSMINGER

IT IS true to the point of truism that a man's world begins with himself and extends outward to include his family, his neighbors, his community, his county, his State. The community occupies the central point in this scale of instinct, thought, loyalties, and social contacts; it provides the most effective unit for county planning because of the established ties among its members.

I was reminded of this when I asked a southern farm woman about the most convenient place for a local meeting to discuss farm and home problems.

"We are just a little different from the other people in the county, and prefer to have our own meetings," she replied.

I asked her to locate on a map the homes of those she meant when she said "We are different." She indicated 14 neighbors, all within a small area.

"Where would these people meet if they came together?"

"The Holmstead church is our only center," she answered. "It is convenient, and we are accustomed to going there. We could and would go there to attend any group meetings and, because of our feelings toward each other, would discuss our local problems freely."

Here we have an important point. People in a rural community—if not in any community—have a feeling of belonging to the area in which they live. They associate with neighbors in schools, churches, and other organizations. They know each other and have many things in common. The sense of community responsibility may not be present always, but usually it can be counted upon in situations that call for concerted action.

How to Mark the Extent of a Community

Often the larger rural community will have a village as its "center." One way to determine community boundaries is to draw lines on a map around areas within which farm families tend naturally to meet together; information on this point can be obtained from persons from different sections of the county and familiar with the farm families in all districts, or from technically trained persons who have toured the county, stopping at farm homes, at crossroads stores, and at other centers to inquire about the boundary lines of community feeling.

The woman to whom I spoke had delimited her own neighborhood group. It remained for her to identify those who could be considered members of the community and the center that would be the best meeting place for discussion and planning.

"Now suppose we wanted to call together several neighborhood groups to discuss the agricultural problems of this part of the county," I inquired. "Where should such a meeting be conducted and who would attend?"

"Well," she replied, "we go to the county seat for our banking, for picture shows, and to buy most of our things, but we aren't greatly interested in what goes on there. I guess the Lone Point high school is really our community center. Our children go there and there is a good general store nearby which we use. We know most of the people around here fairly well."

"In how large an area surrounding the school and general store are people interested and well enough acquainted to come together if a community meeting were called at the school?" I asked.

To answer the question, she pointed out the various roads leading from the center and indicated the most distant points at which families would probably have community interests. In this way, anybody interested in determining a community area can mark on a map the place that is just about the farthest from the center on each road—the place at which one might stand and say, "From this point to the village most of the people are identified with that center, go there to trade, to attend church, school, organization meetings, or to participate in other activities. *These are the people who would attend a community meeting held at that center.*"

For the rest of the day I had similar interviews with farm men and women, ministers, school teachers, and the storekeeper. Six "neighborhoods" were identified in this way. Each expressed more interest in working with the other five than would be the case if the community were bounded differently. Furthermore, if a farmer were selected from any one of the 6 groups to serve on a county land-use planning committee, the people from the others would consider him their representative. As a necessary check on the boundaries of the community area, I called on farmers living near the border to discover whether they considered themselves a part of that community area.

Distinctions Between Communities and Neighborhoods

Outlining rural farm communities reveals the tendency toward a variation between the intimate neighborhood social group and the larger community. The difference may arise as a distinction between neighborhoods whose members *know* each other and larger communities whose members *know of* each other. The significance lies in the fact that the more intimate the group—and usually the smaller it is—the surer the circulation of ideas and the adoption of practices and opinions of the leaders are likely to be. By the same token, the more intimate groups tend to exert greater influence on their members.

Just as the county committee is representative of all the communities of the county, the community committee should be representative of the neighborhoods, or smaller groups of different strength and social status within the community. What, then, is the neighborhood? How is it to be identified and located?

The neighborhood is in a sense what the word itself implies, a small group of families that forms a cluster of neighbors. Generally a neighborhood has a name and a center and usually a school, a church, a store, or some combination of these. Sometimes it is a racial, religious, or nationality group. At any rate, it is a small group of people who know each other intimately, who could easily meet together, and who, because of their close day-by-day relationships, would be very likely to express themselves freely in neighborhood group meetings. Such groups provide the most representative cross-section of information on conditions and local problems in the county.

Identifying Various Neighborhood Areas

A group of well-informed persons from within the community or a technically trained person will be able to identify and map the various neighborhood areas. The procedure is similar to that of mapping community areas. First, all the churches, schools, and trade centers within the community are located. Consideration may then be given to the immediate area surrounding each of these centers to discover the area within which people know each other well, look upon each other as neighbors, consider themselves as being a part of the immediate neighborhood, and *would and could come together if a neighborhood meeting were called.*

Special study should be given to localities where people have a distinct sense of belonging to the area and think of themselves as neighbors, regardless of whether they have services there. Sometimes neighborhood ties either have never existed or are no longer present, but even in such cases it has been possible to outline areas where people can conveniently meet together and within which they have more in common than if they were grouped in any other way.

While the individual families may look to the community center for some church, school, or other services, rural neighborhoods often carry on programs that meet many of the people's needs. Because the people are well acquainted with each other, have neighborhood loyalties, and can easily meet and work together, they will play an important part in making plans and then doing something about the plans.

The number of families within a given neighborhood varies greatly. In any case, the neighborhood contains too few families to provide a basis for a local farm club or to warrant a separate farm meeting. Even in such cases it should not be inferred that these small neighborhoods do not constitute a local farm group whose self-consciousness and whose problems are sufficiently well defined to justify representation within the larger grouping to which the small neighborhood might be attached for practical purposes.

There is no hard and fast procedure for all this—no reason, for instance, why community areas need be mapped before the neighborhood areas are identified and mapped. In some cases it has been found easier and more desirable to start mapping the smaller neighborhood groups and then determine with what other neighborhoods they will cooperate and thus of what larger group they most logically are a part.

Democratic Planning and the Need for Action

In some cases the community land-use planning committees may find that changes will need to be made in the community boundary line so as to come nearer to including within the bounded area the people who will form the best large working groups of farmers. The assignment of analyzing the boundaries in more detail might be continued by a subcommittee on community life which can then present its findings at a community meeting.

Two questions important to persons engaged in the planning program are: How can planning be done in the most democratic manner? How are we going to get the plans put into action?

If all farmers could be members of a county land-use planning committee, planning would be entirely democratic as it is in some New England town meetings. Obviously, it is not possible to do this, but it is possible to choose the members on the basis of their ability to represent nonmembers.

There is no one best way of choosing the members of such a committee. The county committee may be composed either of the regularly elected chairmen of community committees or of persons elected by community or county-wide elections apart from those held to choose community committee members. By and large, the best guarantee that the committee members will be representative of the majority of the people in their communities is to have the people in the community elect them. When a county committee member represents a definite group, he is usually the spokesman for that group. What he says is influenced by their experience as well as his own.

Special-interest groups like the Grange, Farm Bureau, Poultry Association, and others do not give a good cross-section of farmer attitudes and points of view. Land-use areas or political units—such as wards, townships, beats, or election districts—do not represent clearly defined, active working groups. A community may be made up of parts of several townships, and there may be more than one community in a township, for the natural community lines often extend half their length or breadth into other townships and sometimes into adjoining counties. To hold to the political boundaries in designating communities results, therefore, in splitting the natural working groups and breaking down the established working relationships of the people.

In this connection, a meeting of a county land-use planning committee which I attended occurs to me. The committee members discussed a series of community meetings which had just been held in the county to find out how farmers would react to organizing a soil-conservation district. The county agent was a bit weary, for, as he put it, "I have just met with all the communities in my county and when you meet with 26 communities—in some cases holding 3 meetings a day—you know you have held meetings."

Soon the discussion centered on organizing land-use planning community committees. They were all agreed that it was too much to have 26 land-use planning community committees in the county.

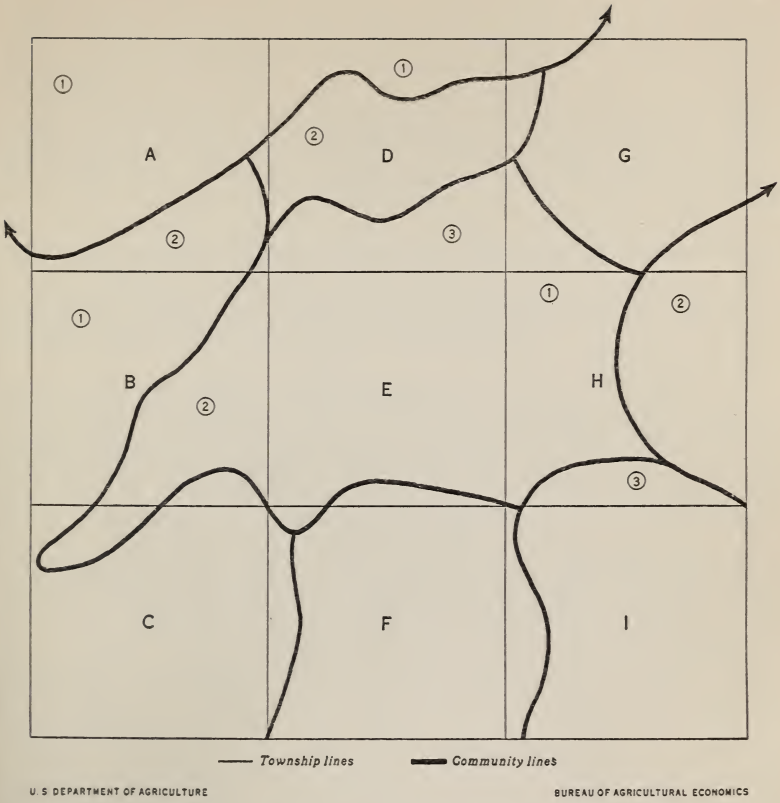
"Not enough days in the calendar year to have three or four meetings in each community and still do my job," was the county agent's comment.

"Why don't we group the communities?" asked one member of the committee. And so the discussion continued. The 26 communities turned out to be election districts—not communities.

A subsequent survey of this county, made at the request of the county committee, revealed 7 distinct and easily bounded communities. It is to these 7 centers, if community meetings were called, that most of the people living within the bounded areas would come.

In a discussion with the author a project leader pointed out that the community committees for the unified county in his State were representative of people of a common interest because each committee was dealing with a more or less uniform problem. These committees were made up of people who lived within the various outlined land-use areas, each of these areas being of a uniform physical nature and thus presenting a uniform economic problem.

Recently a representative of the Bureau of Agricultural Economics commented: "We carried our land-use planning program through this past year and held our discussions on community meetings in the nine townships in the county. Now that we have written our unified report we are beginning to wonder how we are going to get the people to *put the plans into action.*"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Township lines
Community lines
U. S DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ECONOMICS

The discussion centered on the response of the people when township meetings were conducted. We drew a sketch of community and township areas, like the accompanying map. In township *A* the people from the A_1 part of the area did not appear to be interested in what was going on. The *B* township was somewhat better in this respect, but people from B_2 seemed to be more interested in other things. In *C, F,* and *I* townships the situation was more satisfactory, for people attended meetings and seemed interested. In the *H* area it was difficult to get people out to meetings and when they did attend, they were inclined to divide into two groups. The response was good in *E,* fair in *D*, and not so good in *G*.

A survey revealed that the A_1 and D_1 areas were a part of a larger community whose center was outside the county. The B_2 area was a part of the community whose center was in *E*. The *C, F,* and *I* township lines corresponded very closely to the community lines. The H_1 area was a part of the *E* community, while H_2 was struggling to maintain its own identity, wanting to have as little as possible to do with H_1. The *G* township was experiencing a number of changes, among which was the loss of an industry. Holding to township lines resulted in less effective working groups in the *A, B, D,* and *H* townships.

Which Group Should Committee Members Represent?

Regardless of all possible groups that may be represented on a committee, the whole rural community itself provides the most effective unit for planning.

The importance of basing county land-use planning on the community extends through the whole land-use planning process, even when the first group of farmers is called together by the county agent to discuss the planning idea. These are the farmers who will go back and discuss the planning program with other farmers in their communities and in organizations of which they are members.

In fact, the community chairmen will need to depend to a large extent upon the various committee members who are recognized leaders of the various neighborhoods within the community area for making the majority of the farmers "land-use-planning minded."

In due time, these leaders will find it advantageous to call a community-wide meeting so that all of the people will have an opportunity to learn about the proposed plan and perhaps put it to a vote to see whether they want to take part. If the vote is favorable, a plan may then be formulated for the election of one representative from each of the neighborhoods to form a permanent community committee. In many cases, neighborhood meetings are conducted so that more people can participate in the discussion and elect their representative to the community committee. Somewhat the same procedure may bring about the formation of the county committee.

The Functions of Community Committees

It is not assumed here that the community committee necessarily will do all the work of planning. On the contrary, this committee can very well become a coordinating or community advisory council to give leadership and direction to the program of land-use planning in the community. Numerous subcommittees can be set up to work on special community problems or needs, such as subcommittees on land use, soil conservation, home gardens, young people, education, churches, and community life. Through these subcommittees most of the investigation can be carried on, the greatest number of people may be brought into the program, and new interest may be created in community planning.

An emotional impulse to do something about the recognized problem or need will generally follow open discussions between the leaders and the members of their communities. As a rule, efforts to meet these needs will elicit numerous proposals that will vary greatly and often will actually conflict with each other. So that a fair and sound solution may result and that all interests may be taken into account, the community will in all probability seek to discover the facts—in other words, investigate so that the solution will be founded on facts. Research becomes useful at this point in community action.

Communities Have Individualities

After the investigation, open discussion at a community meeting makes it possible for all sides to be presented. The various points of view can then be integrated and a compromise solution offered which will be acceptable to the greatest number and be more nearly adapted to meet the needs of the individual community.

Communities, like people, have individualities. Although there is a certain amount of uniformity in all communities, each functions in its own way. Because of these differences in community settings and ways of operating, it is not possible to set up any particular method of organizing a community and then expect that method to work in every detail in all the subdivisions of one county, let alone in all sections of the country.[1] The approach is always a practical one.

Each community seeks the most efficient method for itself and because of varying local conditions, has its own starting point toward the goal to be attained: A united community, working toward a definite, practical, long-term plan of development along the lines of its greatest interest and need.

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[1] *For those who would like to obtain a more detailed statement of how to map community areas, Cornell Extension Bulletin No. 413, Locating the Rural Community, June 1939, by Dwight Sanderson, can be obtained from Cornell University, Ithaca, N. Y. For information on how communities work as groups and how such a group could become a force in planning, these publications may be consulted: Rural Community Organization, by Dwight Sanderson and Robert A. Polson, John Wiley & Sons, Inc., New York, 1939; and Mobilizing the Rural Community, by E. L. Morgan, the Massachusetts Agricultural College, Extension Bulletin No. 23, Amherst, September 1918.*

Books

Revolution in Land. *Charles Abrams. Harper and Brothers. New York. 315 pp. 1939.*

by Melville C. Williams

IN his book, Mr. Abrams suggests that we are on the threshold of a revolution in land that promises to surpass the significance of the industrial revolution. He sees a single land problem, involving both rural and urban lands, and examines it around the central themes of diffusion of ownership, mechanization, overproduction, unpredictability, taxation, debt, tenancy, waste, decelerating population growth, and public intervention.

Although Henry George predicted that land ownership would dominate our economic structure, Mr. Abrams says that industry has actually done so, and that we have now reached a point where land ownership is too often a liability.

This "enslavement" of land by industry is traced fundamentally, in the case of rural land, to industry's price control of the farmers' purchases, by monopoly and tacit agreements, and to the cyclical swings that have reigned unchecked in the prices of farm products. The "enslavement" of urban lands has followed a different course, but with the same result.

Although the expansion of industry created and fostered urbanization with its myriad social problems and high governmental costs, the difficulties of collecting local taxes on intangibles, of which industrial wealth is largely composed, have enabled industry to avoid its fair share of the tax burden and to shift it to real estate.

THE tools used by industry to gain and maintain its ascendancy have been the mortgage, the land tax, and building construction costs. The mortgage system has tended to cause speculation and overextension, rather than investment, tempting the man of moderate circumstances to purchase a home with a mortgage so large that he must inevitably default at the next downswing of the business cycle.

The system has also concentrated economic power in the hands of institutional lenders, such as insurance companies and banks, and given them as unwarranted control over land. Thus, the charge is made that dislike of New Deal policies, coupled with a desire to bolster the security behind excessive mortgage loans by creating an artificial shortage of buildings, caused the institutional lenders to hinder recovery by refusing to make loans for new construction.

It is stated that the land tax is, in effect, a capital levy that cannot be defended upon any logical ground. It falls the heaviest upon the farmer and small home owner; it produces soil "mining" and erosion, and forces land into uneconomic uses. The construction industry is also condemned for placing the cost of home construction far beyond the reach of the average worker by maintaining handicraft methods in a machine age and by establishing virtual monopolies to impose prices as high as the traffic will bear.

THE many Federal activities affecting land are discussed and condemned as being haphazard, unrelated, with not even an attempt to correct the real roots of the problem, and as merely trying to shore up and underpin the excessive land prices, mortgage loans, and other maladjustments that existed at the onslaught of the great depression. Thus the Government, by refinancing home and farm mortgages without adequately scaling down the principal, has saved the mortgagee's investment but only prolonged until the next crash the futile attempts of mortgagors to escape foreclosure.

By June 1938 more than half of the H. O. L. C. loans to refinance homes were in serious and long-standing default, or had already been foreclosed. It is predicted that in the next downswing, and perhaps before, Federal agencies will be faced with the difficult question of whether to engage in mass foreclosures of farm and urban homes.

Mr. Abrams' suggestions for solution sketch only a general outline. The Federal Government would form an integrated national policy of general principles and broad conditions, would supervise compliance with it, and would possess all spending, police, and taxing powers. It is recognized, however, that local initiative must be maintained to check a complete centralization of power and to preserve our democratic institutions. Local autonomy would thus be maintained in some form or other, perhaps in regional land authorities.

The use of land would be planned, and the plan would be implemented by a very extensive land purchase program amounting to a nationalization of all land that could not consistently and logically be left in private ownership.

As companion measures, the tax system would be reformed to distribute its burden more fairly; the field of mortgage finance would be reexamined and major changes made; industrial price policies bearing on the small landowners and tenants would be revised, and further credit would be made available for construction, particularly for self-liquidating housing operations.

The author does not attempt to point out where people will be resettled, how problems of interregional competition will be solved, or just how an adequate income can be assured to farmers and the unemployed. Presumably, these are to be worked out as details of the national policy. Regardless of whether such a plan could actually be prepared, Mr. Abrams' ideas are undoubtedly interesting and stimulating.

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HUNGER AND HISTORY: *The Influence of Hunger on Human History. E. Parmalee Prentice. $3.00. Harper and Brothers. New York. 269 pp., XVII. 1939. Illustrated.*

by MARY TAYLOR

WHAT idyllic hours, days, and months—if not years—must have gone into the making of this book! Thumbing through bibliotheques, museums, libraries, here and abroad; poring over ancient manuscripts; deciphering half-forgotten languages; culling from great and fragmentary records a phrase here and there; piling note upon note, and quote upon quote, to build a picture of the food habits of people from the beginning of time.

No one who has a yen to know what has gone before his generation will fail to be beguiled by the erudition of the record presented here not only of food habits but of modes of food production, types of foods consumed, the want and misery that came with the lack of food, and even of the amenities of eating through countless generations.

Few of us have the time, resources, or facilities for so exhaustive a piece of research, but many of us can appreciate its rewards, and share vicariously the satisfaction its undertaking must have brought the researcher.

Because so much that is fascinating is crowded into its pages, it is unfortunate that the value of the book as a whole is vitiated by the naive opinions and thesis that intrude upon the presentation of factual material.

THE thesis of the book is simple: The history of modern civilization divides into two periods, one of 2,300 or more years; the other of 139 years. The year 1800, or thereabouts, is the dividing point. Until that time, humans struggled intermittently with hunger. Populations periodically overran food supplies. Great misery and want then devastated the people.

The author quotes from a British statistician, writing in 1846, that from 1200 to 1600 there were an average of seven famines and 10 years of famine in a century. Explanation for this devastating record seems to be that the producers of food were not free men and the "profit motive had been successfully eliminated." Then, presto, there was a change.

"When commons were abolished, the opportunity came. Thereafter, man could control his own field, enjoying, in St. Jerome's phrase, the fruit of his labor, and so an inducement was offered to private ambition. Once more there was surplus produce and this surplus brought leisure and an opportunity for study. Man could lift his eyes from the ground and his hand from his work and out of it all came machinery and our industrial civilization."

Miraculous, but true, according to the author. Our present concern, it seems, is simply to insure that the producers of food continue to control their own fields.

". . . In the twentieth century," he writes, "it should be unnecessary to argue that freedom is good and that taxation and regulation are bad."

"All persons, therefore, who are interested in having an adequate food supply for the Nation and in maintaining democratic institutions, are vitally concerned in the reduction of taxes and in protecting industry and agriculture from political control. 'It is the cardinal principle of our national life,' Mr. Wendell Phillips said, 'that God has given every man sense enough to manage his own affairs.' "

MR. PRENTICE allows himself only one specific sideswipe at the agricultural programs of the New Deal. As illustration of the perniciousness of governmental interference, he says: "A little interruption by the American Government in the raising of corn, united with a drought, resulted during 1935 in an increased importation of corn amounting to 7,265.3 percent over the average of the preceding five years."

Undoubtedly he could add to this alarming picture and not be troubled by the fact that the imports of corn in 1935 represented only one percent of all the corn consumed in the country. (Actually the increase in imports in 1935 over the previous 5 years was 1,965 percent.) Mr. Prentice might have gone on to say that despite continued "interruption" by Government in 1937–38 there was the largest net export of corn (exports minus imports) since the year of freedom 1921–22.

But it is unfair to linger too long on the prejudices and philosophy of the author. There are great passages in which they do not intrude on the absorbing record unfolded of feast and famine as of old. In separate chapters he culls from ancient texts and authorities the histories of different foodstuffs, meats, vegetables, milk, poultry products. In recounting the development of milk as an item in diet, there is a singular ignoring of the importance of Pasteur and of pasteurization in breaking down prejudices against fresh milk and in extending the market for this highly prized and desirable food.

ODD facts come to light, and throughout the book the reader learns much about simple day-to-day food problems of people living in a simpler age. Beef, it seems, is a relatively modern food.

"The ancients wished so to protect this animal from violence that they decreed capital punishment for any person who wilfully killed an ox. . . In the Middle Ages, as in the ancient world, cattle were draught animals and beasts of burden."

Much of the animal flesh consumed was high. It weighed heavily on the breath. "Marco Polo," it is related, "says that the Great Kaan, in order to be sure that candidates for his favor had sweet breath, etc., required them before acceptance to procure approval of certain elderly ladies."

Apparently the Latins ate a kind of cabbage "to prevent intoxication," but we cannot be sure that we still have the variety. Spinach is apparently modern, "being first mentioned about the year 1351, as of Spanish origin, whence its name, olus Hispaniense or, as the Moors called it, hispanish."

Potatoes, introduced from America and still more modern, had hard going in Europe. It was not until some 200 years after their appearance in Europe that a Frenchman could write: "At present (1781) there is scarce an elegant repast where Potatoes are not used in various disguises; and their great consumption in the Capital proves that they are no longer despised there."

Cumulatively, through well-selected quotations, the author recreates a picture of the limitations in diet and in food supplies that either permanently or periodically afflicted our progenitors. So deftly is the picture drawn that the reader is left with the feeling that the next time he enters a "quick-and-greasy," he should take his hat, if not his shoes, off.

THE AGRARIAN REVIVAL: A STUDY OF AGRICULTURAL EXTENSION. *Russell Lord. American Association for Adult Education. New York. 236 pp. 1939.*

by JOHN C. ELLICKSON

IN SPITE of a vast physical interlinking of the rural and urban which has changed the American landscape so remarkably since horse-and-buggy days, the open country of the United States (with its attendant nebulae of land grant colleges, farm papers, farm organizations, experiment stations, and State extension services) remains to a strange degree a world apart. It is more than a world; it is a whirling *system* of worlds distinct from the governing commercial structure of the eastern seaboard, the gulfshore, and lakeshore rim."

That paragraph from The Agrarian Revival illustrates Russell Lord's sweeping approach in this study of the Extension Service. Arising from different needs, shaped by varying social and physical forces, bearing the imprint of the personalities of great agricultural leaders, and only loosely coordinated by any central authority, the Extension Service is subject to few generalizations.

One is that: ". . . The Extension Service is far and away the largest single adult education enterprise in the United States, and it continues to expand." Another indicates a major regional difference: ". . . In general . . . agricultural extension teaching in the North and West has tended to lead farming people more and more into commercial farming and commercial involvements, while in the South extension leaders have been trying mainly to make their people less dependent on the commercial ups and downs of the cotton market."

THE Extension Service is broadly considered in relation to the agricultural situation and the other activities of the Department. To a considerable extent it is the result of the work and hopes and dreams of literally millions of individuals, motivated by a desire to improve their own condition or that of farmers in general.

Using a general historical approach, Mr. Lord quotes or describes more than a hundred people in the field of agriculture whose efforts or ideas or influence at the hour of decision helped shape policy and institutional growth, or at least represented an important aspect of the situation.

Specific cases and personalities are used to illustrate general principles, within necessary limits. The work of the pioneers in what came to be the field of Extension is described at length, as well as the hectic growth during the war and the changes accompanying the post-war readjustment and later depression.

The origin of the action programs in 1933 and the part taken in their administration by the Extension forces are described more briefly. These programs and the tremendous increase in farmer participation in their administration have caused profound changes in Extension programs and point of view, varying of course by States and regions.

THE author approves of these changes, and adds: "But I want to see changes made slowly and democratically—if we can find the time—by response to sentiment originating within these areas rather than by mandates or pressures exerted, directly or indirectly, from Washington, from the State capitols, or from both. Our State and community lines can no longer be defended as actual physical borders; but I think that educators should defend them in some measure as borders of sentiment and of democratic differences worth preserving."

What the reader gets out of this book depends largely on the background of information he brings to it.

Those who know little about Extension or agriculture will find this a useful and informative book, even if the relationship of many points covered may not be apparent. But all those acquainted with the field and concerned with probable developments in agriculture and the farm programs will be greatly stimulated by the incisive insights and absorbed in the vivid descriptions of personalities and events.

The tolerant and eclectic point of view expressed provides room for any amount of agreement or disagreement, but this book can be read with pleasure and profit by all.

√ For your attention

Rural Library Service. *United States Department of Agriculture, Farmers' Bulletin No. 1847. Prepared in the Bureau of Agricultural Economics. February 1940. Illustrated. 28 pp. 10 cents.*

The foreword to this booklet says: "Nearly 39 million rural Americans still lack public-library service of any kind. Believing that access to good reading materials is essential to rural progress, the Bureau of Agricultural Economics asked the American Library Association to cooperate in the preparation of this bulletin, which describes some of the rural library services now at work and suggests how rural communities and farm families who are without such services can help to get them for their people."

Topics include how rural people use library books, library service over wide areas, how modern rural libraries are started, leadership in library development, suggestions for action, some types of rural libraries and a directory of State library extension agencies.

The War at Our Feet. *Henry A. Wallace. Survey Graphic Magazine. February 1940.*

The Secretary of Agriculture surveys the need for conservation and the means of achieving it in this timely article. His introduction is:

"We live in a new world. We are less compelled to travel in specific channels by hard material fact than is the case of any other place on earth. We are, to be sure, beginning to feel some of the pressures that most older lands have experienced in their time. But it still seems to me that with a united will, and with a course of action upon which we can agree constructively, we Americans need not feel utterly at the mercy of events abroad. Americans can choose. It is a matter of tremendous significance to the future of the world which ideas we choose."

Share-Rented Farms in Three New York Areas, 1937–38. *P. L. Poirot. New York State College of Agriculture, Ithaca. October 1939. 13 pp.*

In view of the large percentage of farm tenancy in New York State there is a continuous demand in that State from both landlords and tenants for information regarding farm rentals.

This report presents some results of a survey of a year's business on each of 220 selected New York farms, made in order to learn how receipts and expenses are shared by owner and operator. On the basis of these farm records and in accordance with other farm leases in use in New York and other States, a suggested lease form was prepared, designed to meet the requirements of New York conditions. Copies may be obtained by addressing the Department of Agricultural Economics and Farm Management, New York State College of Agriculture, Ithaca, N. Y.

What's New in Farm Science? *Part I, Fifty-sixth Annual Report. Agricultural Experiment Station, University of Wisconsin. Madison. Illustrated. 96 pp.*

This booklet summarizes the research relating to farm engineering, animal diseases and breeding, game management, animal nutrition, home economics, bacteria, molds and yeasts, dairy products, and farm income and welfare. The reports cover the scientific work performed from July to December 1938, by the Experiment Station in developing and testing new farm practices. Part II of the Wisconsin Station's Annual Report to follow in the spring of 1940 will treat livestock feeding, poultry, insect pests, soil fertility, plant diseases, field crops, and garden, orchard, and cash crops.

What Does Montana County Government Cost? *R. R. Renne. Processed Circular 16. Agricultural Experiment Station, Montana State College, Bozeman. May 1939. 24 pp.*

Mr. Renne reports that Montana county governments are in as sound financial condition today as at any time in the past 25 years. Total taxes levied by county governmens in 1938 are shown to be only about 1 percent higher than those assessed in 1933. Delinquent collections were made possible by improved general business conditions and the comparatively large Federal relief and agricultural adjustment payments.

An Economic Study of the Maple Products Industry in Garrett County, Md. *Roy E. Huffman, S. H. DeVault, and J. W. Coddington. The University of Maryland Agricultural Experiment Station, College Park, Md., Cooperating with the United States Department of Agriculture, Bureau of Agricultural Economics. Bulletin 431. January 1940. 50 pp.*

This detailed study seeks to determine the extent of the maple products industry in Garrett County, to determine if present sugar groves are on land adapted to such use and the best alternative use of such land, and to analyze the present practices, methods, and costs of production and marketing.

Studies in Land Utilization: The Farm Business and the Farm Family in Commercial Agricultural Regions. *R. M. Carter. Vermont Agricultural Experiment Station, Burlington. October 1939. Processed. 42 pp.*

An investigation of conditions in nine towns, selected as fairly representative of the commercial agricultural sections of Vermont, is the scope of this study. Land in these towns was divided into four classes according to its adaptation to the existing type of farming, as indicated by the apparent degree of success attained over the years.

Mr. Carter examines, on the one hand, the bearing of such physical factors as location, elevation, topography, and soil upon land class, and, on the other, the relationship of land class to farm incomes, to rural living, and to rural public affairs. There is a record of the location, size, and state of repair of all buildings, including both dwellings and barns, in rural areas; maps showing the location and extent of cropland, pasture, and woodland; a record of the acreage and production of all crops and of the amount and kind of livestock carried in 1936; and, finally, a financial record covering the operations during the year ending June 30, 1938, for one-third of the approximately 900 farms in the towns.

THE QUARTERLY BULLETIN. *Agricultural Experiment Station, Michigan State College. East Lansing. Volume XXII, No. 2. November 1939. Illustrated. 130 pp.*

Timely articles of information for farmers, based largely on the work of the Agricultural Experiment Station, are contained herein. Among the subjects are tractor costs in Michigan, 1938; cost of credit extension in the sale of farm supplies by cooperative associations; traction tests of pneumatic tires; and the influence of some ground cover types upon tree seedling survival.

ORGANIZATION AND PRACTICE OF FINANCIALLY SUCCESSFUL MONTANA FARMS, 1934–36. *Willard W. Cochrane. Processed Circular No. 14, Agricultural Experiment Station, Montana State College, Bozeman. April 1939. 10 pp.*

What makes for profitable farming? This analysis of 314 Montana farms that prospered during 1934–36 shows that the successful farms are located on the better grades of land and that successful farmers have specialized in wheat production, yet supplemented their income with side-line enterprises. The cash income from Federal payments for crop reduction and soil-conserving practices has been an important minor source of income for these farmers. They were found to be above the average in managerial ability, and sufficiently progressive to accept new and promising ideas and practices.

RELATIONSHIP OF PRODUCTIVITY OF FARM UNITS AND THEIR ABILITY TO PAY RENT. *Brown R. Rawlings, Jr., and O. R. Johnson. Research Bulletin 308, Agricultural Experiment Station, University of Missouri, Columbia. November 1939. 43 pp.*

The study here presented concerns primarily the development of a technique and method of determining the adequacy of farming units from the standpoint of paying a net rent. Well-known rent theory is applied to actual data on costs of production and total production obtained from more than 300 selected farms in Harrison, Callaway, and Nodaway Counties, Missouri, and Decatur and Ringgold Counties, Iowa. Economic rent is computed and compared to the commercial rent for the farms considered.

The authors found that there are farms in all of the areas studied which are either too small or too low in productivity, or both, to leave anything for the landlord after providing an adequate standard of living for the operator and paying the operating costs; and that there is still another still larger group of farms in each area which are either too small or too low in productivity, or both, to provide an adequate standard of living for the operator and at the same time pay operating expenses, landlord's necessary expenses, interest on improvement capital, and leave anything for a net rent.

EDUCATIONAL FOUNDATIONS FOR RURAL REHABILITATION. *R. W. Roskelley and Olaf F. Larson. Bulletin 457. Colorado Experiment Station and W. P. A. November 1939. 26 pp. Appendix.*

This report makes available certain statistical data concerning the educational attainments of members of rural households receiving relief in Colorado. Limited educational accomplishments of family heads and educational retardation of school children are the characteristics of this rural relief group. What are the implications so far as improving the socio-economic status of this educationally disadvantaged class? It means, say the authors, that any program of effective relief administraion, rehabilitation of clients, or the prevention of further relief problems must take into consideration the educational progress and achievement of the persons involved.

TYPES OF FARMING. *V. B. Hart. New York State College of Agriculture, Ithaca. June 1939. Processed. 22 pp.*

Growing a particular crop or raising a certain kind of livestock is almost wholly dependent on whether it pays, says the author, and it is by a process of trial and error that the kind of crops and livestock and the farm practices best adapted to a section survive and others are eliminated.

What determines the most profitable type of farming in any region? The writer lists climate, soil, and topography; marketing costs; changes in relative value of product; competition between different crops and livestock; consumer demands, land values, and available capital; insect pests and plant diseases; cycles of over- and under-production; labor supply and neighbors, and personal likes of the individual.

The latter half of the report is devoted to a discussion of where different farm products are produced and why. Sixteen kinds of farm products are discussed and five types of livestock are treated

Delay in adjusting agriculture to changing conditions is attributed by Mr Hart partly to the force of habit and partly to the fact that farmers frequently do not have sufficient information so that they can determine whether changes in the demand for and price of specific products are temporary or permanent. The author feels it is important that the individual farmer understand the factors which determine the most profitable type of farming for his section and also that he have a good understanding of changes that are taking place in those factors.

NOTES ON THE SIGNIFICANCE OF TRADE, LEGAL, AND PRICE BARRIERS IN RELATION TO "SOCIAL PROGRESS." *S. von Ciriacy-Wantrup. Agricultural Experiment Station, University of California. Berkeley. July 1939. Processed. 14 pp.*

This report discusses the causes and economic significance of various barriers in relation to "social progress," which is defined as security not only in economic but in other lines of human endeavor.

The conditions under which trade barriers can be socially beneficial are considered. Though some argue that trade barriers stimulate infant industries, the author thinks industry can be encouraged more effectively by a public subsidy that could be raised through progressive taxation. He says that employment can be increased through trade barriers, but says that as a general policy this would lead to a decrease in real incomes.

GUIDES FOR USING LAND-CLASS MAPS. *H. S. Tyler. New York State College of Agriculture, Ithaca. November 1939. Processed. 6 pp.*

The land in New York is being classified on a county basis by the New York State College of Agriculture into land-class areas according to the intensity of use to which each is apparently best adapted. From these findings land-class maps are designed. They serve as guides for individuals and institutions in making individual decisions as to land utilization and related problems.

For those who may have questions regarding the proper interpretation and use of the county land-class maps, this pamphlet has the answers. How land-class maps are prepared and why they are prepared are discussed.

CAREERS IN CONSUMER COOPERATION. *Clarence W. Failor. Science Research Associates, Chicago. 1939. 48 pp.*

Young people about to select their careers and vocational counselors will find this booklet of value.

FARMER CO-OPS IN KANSAS. *Wichita Bank for Cooperatives. 16 pp. Wichita, Kans. 1939.*

The growth and extent of farmer cooperation in Kansas since its first cooperative was formed more than 50 years ago are surveyed in this publication. Some of the highlights on farm cooperation in Kansas are: The largest development of marketing and purchasing cooperatives came between 1913 and 1922; Kansas farmers do their largest cooperative business with their grain elevators; the fastest growing cooperatives are those selling farm supplies; more than half of the 170,000 Kansas farmers are members of at least one cooperative.

SCIENTIFIC CONSUMER PURCHASING. *American Association of University Women. 81 pp. 1939.*

This study guide has been prepared for groups interested in the problem of choosing goods for individual or household use and in present production and retailing practices affecting the consumer.

TEACHERS' SOURCE MATERIALS ON FARMERS' COOPERATIVE BUSINESS ORGANIZATIONS. *19 circulars. Farm Credit Administration. Washington, D. C. 1939.*

These circulars are designed for the use of teachers of vocational agriculture. Twelve of them discuss the problems of farmers' business activities in the cooperative marketing of several farm commodities, and in cooperative purchasing, insuring, processing, financing. Six circulars in this "You and Your Co-Op" series deals with the general background of matters like the history, organization, financing, and management of cooperatives. One circular, "Using a Local Cooperative as Source Material for Teaching," is designed to help the teacher in getting the most out of field trips to local or other cooperative organizations.

BUYING A FARM IN NEW YORK. *Howard S. Tyler. Cornell Extension Bulletin 412. 36 pp. Ithaca, N. Y. June 1939.*

This bulletin attempts to assemble some of the more important points to consider in selecting and starting to operate a farm in New York State. The writer makes general suggestions for all types of purchasers and special suggestions for particular types of buyers.

The report discusses the enterprises that are profitable for New York farms, tells where to get maps showing the location of abandoned farms, and compares production-credit associations with banks as a method of financing the operation of a farm.

FARMER CO-OPS IN OHIO. *R. C. Dorsey. Louisville Bank for Cooperatives. Louisville, Ky. 24 pp. 1939.*

Twenty-five years ago there was only one farmers' purchasing cooperative in Ohio. Today, this report shows, 110 purchasing associations are set up from which Ohio farmers buy feed, seed, fertilizer, gasoline, motor oil, farm machinery, and many other farm supplies. Farm products and farmers' supplies sold through Ohio cooperatives are estimated in this pamphlet to be, in dollar value, a third as large as the Ohio production of rubber tires and greater than the output of gasoline and oil by all the crude petroleum refineries in the State. This survey estimates that of the more than 250,000 farmers in Ohio, probably a third are purchasing farm supplies or marketing farm products through cooperative organizations.

FARMER CO-OPS IN COLORADO. *Val C. Sherman. Wichita Bank for Cooperatives. Wichita, Kans. 1939. 24 pp.*

From carnations to pinto beans, and honey to turkeys, there is scarcely an agricultural commodity in Colorado's wide diversity of farm products that is not handled cooperatively, Mr. Sherman reports. He says that approximately one crop dollar in every three is received or bargained for through cooperatives. Livestock cooperatives are reported to account for a third of the cooperative business in the State.

Contributors to This Issue

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LAND POLICY REVIEW

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Land policy REVIEW

. III MAY-JUNE 1940 No. 3

A Need for Work, A Need for Workers

by RAYMOND C. SMITH

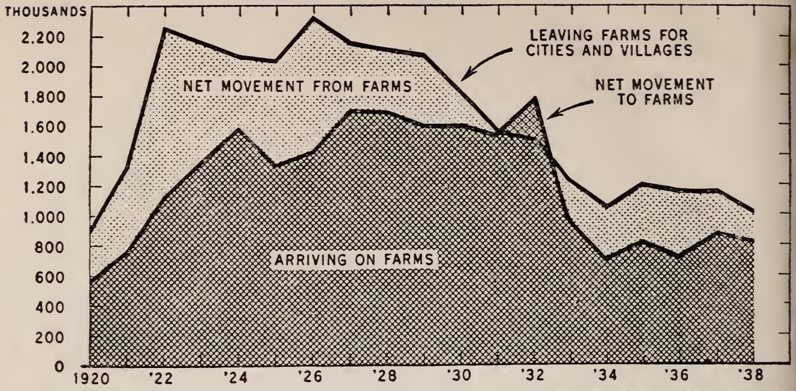
AN ARMY of people on American farms needs work. An enormous conservation task cries for attention on our land. To bridge this gap between idle men and undone work that must be done is a primary problem—of unemployment and underemployment, too.

Because many persons are convinced that unused manpower is purely an urban and industrial problem, remedial measures so far have been directed largely at the urban aspects. But we must remember that much of idle manpower stems from farms, and that any basic, fundamental approach must be through the source of the problem.

Like the problem of industrial unemployment and idle plants is the need on the farm to build back depleted soil, water, and forest resources, and to assure secure incomes and jobs for more than 3,000,000 men. Half of them were registered in 1937 as totally or partly unemployed, with neither a job nor a steady income. The other 1,500,000 and their dependents barely existed on gross cash farm incomes averaging less than $200. Since farm operating expenses come out of this meager

MOVEMENT TO AND FROM FARMS, 1920-38

BIRTHS AND DEATHS NOT TAKEN INTO ACCOUNT



U. S. DEPARTMENT OF AGRICULTURE

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amount, so little is left for living that relief payments are used to supplement the incomes of large numbers of these families.

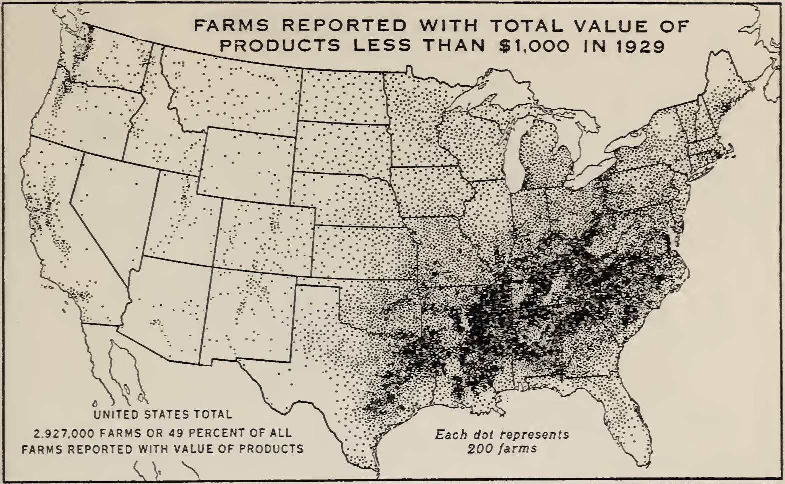
1,600 Million Man-Days for Conservation

It is estimated that these people represent an unused labor supply of at least 450,000,000 man-days each year. From these groups come most of the serious relief cases in rural areas and most of the landless migrants who search over the face of this rich earth for security.

But this is only one side of the problem. These needy people live in areas where natural resources have been punished the most severely, where soil depletion and erosion are the most advanced, where forests have been the most ruthlessly cut-over, and where land and water resources are the least protected from further abuse; and in these areas are to be found not only the greatest need for conservation but also the largest number of farm people in need of work. When we realize this, we begin to see an answer to the problem. It is estimated that more than 1,600,000,000 man-days of labor are required to accomplish much-needed conservation work.

Bringing together the poor, idle man on the land and the pressing conservation job is the task that lies before us. We know pretty well who and where the farm men without adequate incomes are, and the Forest Service and the Soil Conservation Service have studied carefully the areas where big conservation jobs remain undone.

A work program that would marshal this unused manpower to perform the needed task of conservation on the farm suggests itself as a natural solution to two problems: First, the immediate need of 3,000,000 farmers for jobs or supplemental income, and, second, the need of the land for conservation practices that will pay permanent


FARMS REPORTED WITH TOTAL VALUE OF PRODUCTS LESS THAN $1,000 IN 1929
UNITED STATES TOTAL
2,927,000 FARMS OR 49 PERCENT OF ALL FARMS REPORTED WITH VALUE OF PRODUCTS
Each dot represents 200 farms

U S DEPARTMENT OF AGRICULTURE NEG 27330 BUREAU OF AGRICULTURAL ECONOMICS

dividends in larger farm incomes and more secure homes. Thus, one check would pay two bills and a single stone could slay two Goliaths.

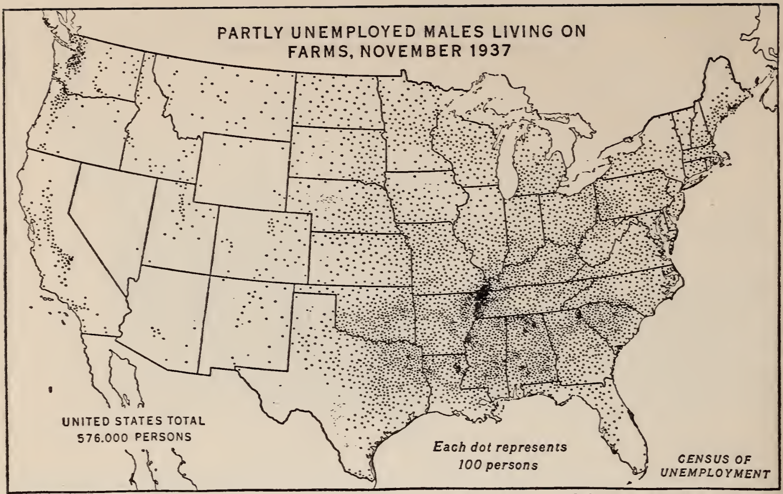
Sources of Farm Unemployment

Unemployment on farms comes from more than one long-time trend. For 60 years, from 1870 to 1930, the proportion of the total gainfully employed in farming has declined almost constantly. Annual net migration from farms to cities reached a peak of 500,000 to 1,100,000 from 1922 to 1926. Since 1926 the tide of net migration to the city has receded. Since 1932, when more people migrated from cities to farms than from farms to cities, the net migration cityward has continued at a rate of 200,000 to 400,000 each year. There is, besides, the net increase in the number of working males on the farms, amounting to 200,000 annually.

In the 1920's many of the unemployed on the farms and those dissatisfied with their lot on the farm moved to cities, where most of them found jobs. In the depressed 1930's, numbers of them went back to the farm. From the looks of things, rural areas will have to furnish opportunities for even more families in the 1940's and, since the natural increase within the farm population each year exceeds the net cityward migration, there has been a steadily increasing number of persons on farms since 1930. Probably more people live on farms today than at any other time in our history.

Programs Do Not Reach Enough Farmers

So it is that land that cannot support a family is being worked, and such words as "unemployment," "relief," and "rehabilitation"—


PARTLY UNEMPLOYED MALES LIVING ON FARMS, NOVEMBER 1937
UNITED STATES TOTAL 576.000 PERSONS
Each dot represents 100 persons
CENSUS OF UNEMPLOYMENT

U. S. DEPARTMENT OF AGRICULTURE NEG. 35911 BUREAU OF AGRICULTURAL ECONOMICS

practically unknown to the agricultural economy a generation ago—are common today. More than 2,900,000 farms, almost half of the national total, reported production under $1,000 in 1929. Here the birth rate is the highest, farms are the smallest in crop acres, the soil and people are poor, and the agriculture is either largely one-crop or comparatively noncommercial. The need for supplemental income is obvious. Over a wide area it is matched by the need of their land for conservation practices.

Present activities in the Department of Agriculture have not yet helped enough of these farmers.

Agricultural Adjustment Administration payments have gone quite generally to farmers in corn, wheat, and cotton areas. The Farm Security Administration has been able to take care of only a portion of these people through the rehabilitation program, often because limited soil resources have made it impossible to work out a balanced farm plan. Nor has the Soil Conservation Service been able yet to operate extensively in some of the areas of greatest human need. In fact, none of these programs was designed to tackle directly the unemployment problem on farms.

The Tragedy of Erosion

The extent of the conservation job often has been recounted. But a few figures will reemphasize it: An erosion survey in 1934 showed that approximately 52 million acres of land have been essentially destroyed for tillage; 151 million acres have been damaged severely and 1,373 million acres moderately to slightly damaged; from the billion acres in farms, it is estimated that 3 billion tons of soil are removed every year by erosion.

Building and conserving these resources is the task that we have to do if we are to save our primary natural resource, the land, for the use of posterity and maintain it at its maximum effectiveness for the use of our own generation. Practically every State has millions of man-days available for this work. The following shows the regional distribution of both man-days of labor available each year and the man-days of labor required to accomplish the job:

	Total man-days available	Total man-days required
New England	8,725,000	57,261,000
Middle Atlantic	22,160,000	79,504,000
East North Central	50,084,000	234,398,000
West North Central	56,194,000	286,264,000
South Atlantic	81,283,000	322,386,000
East South Central	98,529,000	235,257,000
West South Central	96,880,000	245,821,000
Mountain	16,609,000	83,517,000
Pacific	16,056,000	77,731,000
Total	446,520,000	1,622,140,000

Computed in the column "Total man-days available" is the time of the 1,547,000 males living on farms who registered in the unemployment census of 1937 as totally or partially unemployed or as having only emergency employment; also 90 days' time of approximately 1,500,000 farmers in greatest need of supplemental income.

Benefits and Responsibilities of Society

A rural conservation works program directed toward conservation has been suggested by an Inter-Bureau Coordinating Committee of the Department of Agriculture. Society as a whole would be benefited by such a program. By the same token, society as a whole might well assume more responsibility through public action to assist in bringing about more conservation of our human, soil, water, and forest resources.

The program could be administered without great difficulty. The Department of Agriculture has already gained considerable experience in conserving natural resources. The kinds of appropriate measures are well known and are already being practiced, although on too limited a scale. Most of the work could be handled by unskilled labor under proper supervision. Unemployed and underemployed farmers are qualified. The work could be so scheduled that totally unemployed farmers could devote full time to it, while other farmers, a part of whose time is taken by limited farming operations, could be available for work during off-seasons.

How the Program Would Work

Both public employment, supported by public works projects pay rolls, and private employment, supported by public or private credit, could well be involved. A distinction would have to be made between low-income or unemployed farm people and other farmers above the low-income level. Conservation work could be undertaken under the program on lands belonging to both types of farmers.

The laborers employed, however, on both types of farms should come from the unemployed and underemployed farm group. Where the conservation work would add substantially to the value of a farm owned by a comparatively prosperous farmer, the farm owner should either finance an appropriate part of the cost of such work himself through loans, or, when the work could best be performed through public projects, agree to repay a proper part of its cost, or stand a proportionate share of the total cost through contributions of material, equipment, or labor.

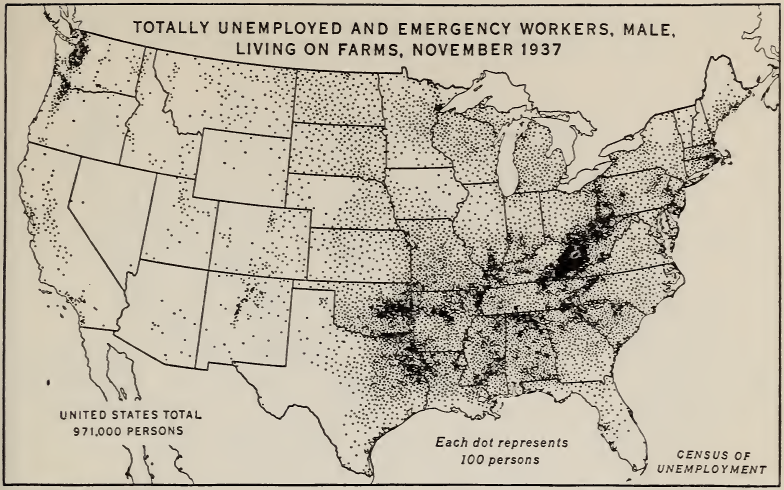
In cases where the owner of the land to be conserved might himself qualify as in the low-income group and in need of public assistance, or where proper leasing arrangements would assure the benefits to a needy tenant, it would be appropriate for the public to bear a large portion of the cost. It also would be proper for the public to bear all or a large part of the cost where the conservation work added little or nothing to the value of a particular farm but was undertaken primarily to protect other lands, highways, reservoirs, or other public properties.

Repaying the Costs

The determination of the part of the total cost that the land-owner should repay would be one important consideration in administering a rural-conservation works program.

Local committees of farmers could be used to recommend what fractions of the total costs should be borne by the public and the land owner. To the extent that public credit was used to support private employment in conservation work, lower interest rates or more favorable repayment terms, or both, might be made available to large landowners who would agree to employ families certified as in need of public assistance. Less favorable terms might be offered where the borrower desired to employ other than needy people.

Within a particular area, and even on the same farm, a conservation program might be developed involving both public works projects and private work supported by public or private credit. Thus, a public


TOTALLY UNEMPLOYED AND EMERGENCY WORKERS, MALE, LIVING ON FARMS, NOVEMBER 1937
UNITED STATES TOTAL 971,000 PERSONS
Each dot represents 100 persons
CENSUS OF UNEMPLOYMENT

U. S. DEPARTMENT OF AGRICULTURE NEG. 35912 BUREAU OF AGRICULTURAL ECONOMICS

works project in a particular locality might be undertaken in which certain large-scale operations would be financed at public expense to constitute a developmental skeleton, while loans on a self-liquidating basis, or a combination of loans and grants, depending upon the economic status of the landowners, could be made to individual farmers for work on their own farms necessary to complete the area conservation plan.

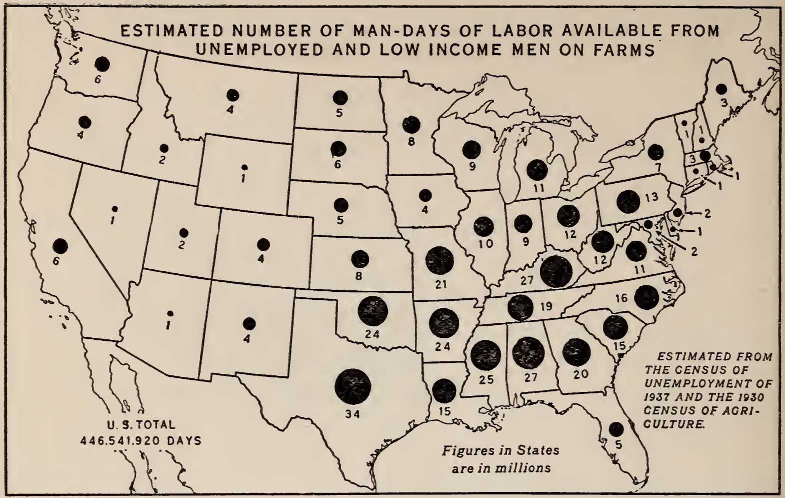
It is now more generally recognized that there is a public interest and a benefit to the general public in conservation of our natural resources. It would seem, therefore, that the public should assume a part of the cost of conservation measures on privately-owned land. The public is already bearing a large relief burden which could be eliminated, or at least greatly reduced, through a rural-conservation works program.

Some Definite Possibilities

Some of the following approaches may be appropriate:

A program of forest-conservation works projects could be administered by leasing from or entering into cooperative arrangements with the owners of private forest lands. Such work as tree planting and forest restoration, fire protection, sustained yield management, and harvesting of timber could be accomplished by the Government, the owner's contribution being made by turning over to the Government an agreed-upon portion of the returns from timber sales.

Soil- and water-conservation works projects could be administered by the Government through cooperative agreement with the owners


ESTIMATED NUMBER OF MAN-DAYS OF LABOR AVAILABLE FROM UNEMPLOYED AND LOW INCOME MEN ON FARMS

U. S. TOTAL
446.541.920 DAYS

Figures in States are in millions

ESTIMATED FROM THE CENSUS OF UNEMPLOYMENT OF 1937 AND THE 1930 CENSUS OF AGRICULTURE.

U. S. DEPARTMENT OF AGRICULTURE NEG. 35938 BUREAU OF AGRICULTURAL ECONOMICS

of private crop and grazing lands. Terms of the cooperative agreements with private land owners could assure the Government that the land would be managed properly after completion of the work and should state the amount which would be repaid to the Government.

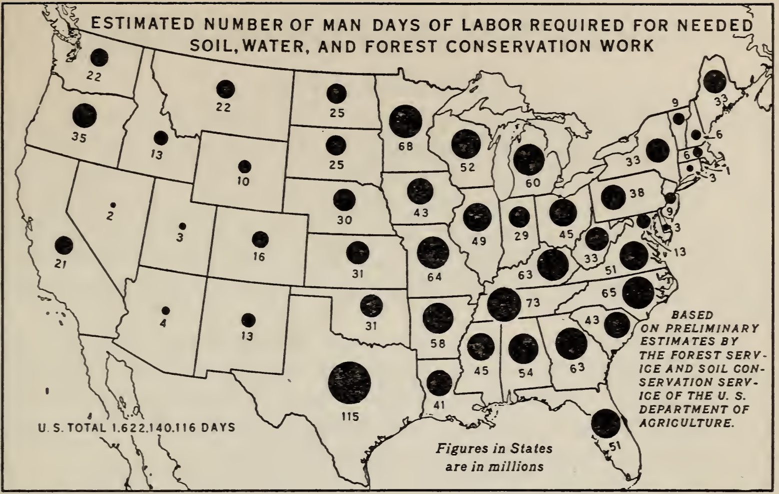
If the necessary machinery were created, loans might be made to forest products enterprises not only for direct conservation work, but for business purposes such as mill construction or expansion, and road building, with the loan agreements providing for sound conservation practices and sustained yield management.

Adequate amounts for conservation work could be included in all tenant purchase loans.

Short-term conservation loans could be made to farmers for terracing and other conservation practices on their farms. Loans also could be made to cooperative associations for such purposes as limestone crushing and purchase of terracing equipment. Production-credit associations and banks for cooperatives could well expand this type of activity.

Funds for adequate conservation work could be included in all long-term loans made by Federal Land Banks and by the Land Bank Commissioner. Considerable conservation work might be accomplished on farms acquired by Federal Land Banks or by the Federal Farm Mortgage Corporation through foreclosure before disposal of such land to new owners.

In connection with a farm-mortgage-refinancing program involving


ESTIMATED NUMBER OF MAN DAYS OF LABOR REQUIRED FOR NEEDED SOIL, WATER, AND FOREST CONSERVATION WORK
22
35
21
13
2
22
10
3
16
4
13
25
25
30
31
31
115
68
43
64
58
41
52
49
45
60
29
63
73
54
45
33
63
43
65
51
51
38
33
9
33
6
6
1
3
9
3
13
U. S. TOTAL 1.622.140.116 DAYS
Figures in States are in millions
BASED ON PRELIMINARY ESTIMATES BY THE FOREST SERVICE AND SOIL CONSERVATION SERVICE OF THE U. S. DEPARTMENT OF AGRICULTURE.

U. S. DEPARTMENT OF AGRICULTURE NEG. 35937 BUREAU OF AGRICULTURAL ECONOMICS

debt adjustment, funds might be made available for needed conservation work on the farms involved. Present excessive farm debts are a major factor in soil depletion, since excessive debt charges often not only prevent needed expenditures for correcting existing conditions, but actually force mining of the soil resources in order to meet debt payments.

If loans to low-income farm families could be combined with grants for accomplishing conservation work upon the farms where these families live, not only could more low-income families participate in the rehabilitation program, but needed conservation work improving the opportunity to make a living on the land might be accomplished. Where such low-income families own their farms, procedures could be very simple. Where there are tenants, appropriate leasing arrangements would be necessary to assure the benefits to low-income families.

To Sum Up

The unemployed human resources and the need for protection and conservation of wasting physical resources lie side by side in the same areas. A rural-conservation works program would provide unemployed and under-employed farm people an opportunity to use their unoccupied time in earning much-needed immediate additional income in an activity which would improve the physical resource base upon which they must depend for a living in the future.

Toward a Conservation Balance

by W. F. WATKINS

CONSIDERING the ever-widening stream of literature dealing with soil conservation, it is surprising to note how much of it concerns either specific practices or the broad social need for conservation, and how little of it is concerned with attempting to define the desired conservation balance, to set specific goals in terms of practices and cropping systems, and to measure the progress that our research, education, and action programs are actually achieving in moving toward the desired goal.

In this article, the writer will attempt to explore this neglected section of the field. Since any estimates or conclusions must necessarily be provisional, it is proposed to start with a statement of conclusions, to be followed by a summary and appraisal of such evidence as may be available and some suggestions for further work.

The Conservation Balance

For the present, it is suggested that *the goal or "conservation balance" toward which we want to work is those uses of land (including farming, grazing, and forestry) that will keep the soil intact and maintain productivity at a level appropriate to the characteristics of the soil in its environment.*

This is not arguing that the goal is "maintenance plus," except for those areas or kinds of land where productivity can be maintained most economically by reversing a downward trend. Nor does it mean that productivity should be restored to the precultivated or ungrazed state, nor even that it is necessary to maintain current fertility in areas where further decreases eventually can be offset at an assured reasonable cost, or areas where the permanent-use level is below the present level.

But it is arguing that man-induced erosion should be minimized and that further depreciation of the productive capacity of any of our soils should be sanctioned only after serious consideration of the social costs and benefits involved.

Regarding the attainment of conservation, three classes of devices must be considered:

The use and management of vegetative growth to halt erosion or restore productivity, including the use of legumes and management devices like deferred and limited grazing, cover crops, and green manure crops, shifts from soil-depleting to soil-conserving crops, and the revegetation of certain classes of land;

The use of mechanical practices, such as contour tillage, basin listing, terracing, contour furrowing, and the various devices for controlling gullies and stream erosion; and

The use of soil amendments like lime, fertilizer, and manure, or other sources of organic matter that will improve the condition of the soil or add productive elements to it.

Which one or combination of these devices is most effective or economical depends on the characteristics of a soil type or group, location, prices, population pressures, and the prevailing types of farm and ranch organization in an area or region.

Some Conclusions

After examining data available in Washington within the Soil Conservation Service and the Bureau of Agricultural Economics, I wish to suggest the following necessarily tentative conclusions which at least offer grounds for argument.

First, a conservation balance has not yet been formulated for most of our farm and pasture land, although considerable progress is being made as a result of the activities of the several agencies working in this field.

The available data indicate that a conservation balance has been established so far on only about 40 percent of our cultivated cropland, that much of our farm pasture land still is improperly used, and that a relatively small acreage of range land is supporting the type of vegetation that best promotes conservation and watershed protection. Or, stating it another way, it is estimated that our soil resources are being depleted at a rate between one-third and two-thirds of 1 percent annually.

Second, the acreage of the principal soil-depleting crops in the better farming areas has been reduced about as much as is needed in the interests of conservation, but only a very modest start has been made toward retiring the needed acreage of submarginal land from cultivation. As a result of the agricultural conservation program, the acreages of the principal soil-depleting crops are currently 25,000,000 to 35,000,000 acres below the 1928–32 level. As far as conservation is concerned, this reduction is perhaps sufficient, provided the right acres are taken out of cultivation, and provided they are correctly used. But another needed change is a shift of submarginal cropland (and land that can be farmed only temporarily) into other uses like grazing, forestry, and recreation. It is doubtful whether much more than 5,000,000 acres, or 10 to 15 percent of the acreage that eventually must be shifted, has been so changed.

Third, the general adoption of a wide range of additional soil-conserving practices is badly needed, and we are a long way from what seem to be reasonable goals in this field. For example, it is estimated that we are currently using contour tillage on not more than 5 percent of the 225,000,000 acres that need to be so tilled, that we are using cover crops and crop residues on only about 20 to 25 percent of the 125,000,000 acres that should be treated in this manner, and that permanent and semipermanent practices, like terracing, strip-cropping, and contour furrowing, probably have been adopted on only about 5 to 15 percent of the land where they are needed.

Two Points for the Future

Regarding the future, two points need emphasis:

First, agricultural workers interested in conservation should attempt to interpret and tie together all available research and demonstration material in terms of goals or acreages of land on which certain specified soil-conserving practices should be carried out, and on which certain crop rotations should be followed.

Second, the agencies interested in individual farm planning should try to formulate a technique to allow farmers to outline a complete farm conservation system that would require a minimum amount of technical help and that would be as useful as possible to farmers participating in the action programs of the Department of Agriculture.

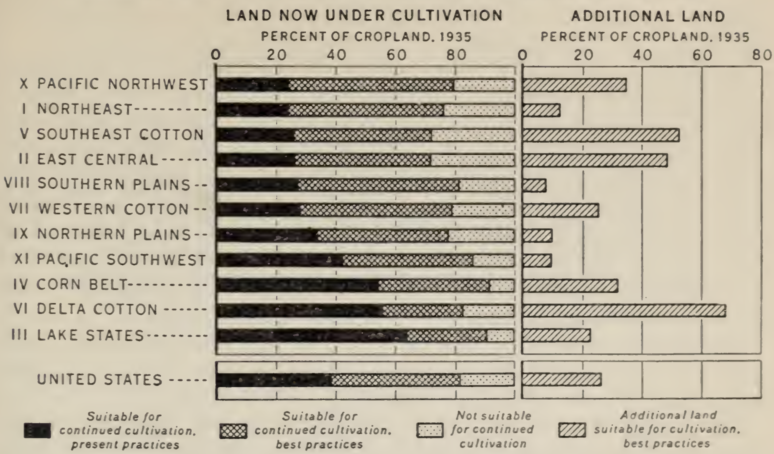
Other conclusions, of course, could be discussed. For example, we clearly have enough farm land now to meet, or more than meet, our needs. And, as a result, it is to be expected that farmers themselves will be rather skeptical as to the value of conservation unless the methods recommended are relatively economical or very simple and practical, and unless the Government or the general public is willing to help bear the cost.

Again, we undoubtedly are currently drawing upon the supplies of minerals and organic matter much faster than they are being replaced as soil amendments. But the question as to when and where the amendments should be added can be deferred, except as they are needed for efficient production or the establishment of vegetation as a device for holding the soil in place—that is, if man-induced erosion can be stopped.

Our Farmland, Now and Tomorrow

Several pertinent questions regarding present and future use of our crop and pasture land should be considered. How much land are we now using? In what condition is it? How much do we need? How much is available?

Farmers now cultivate annually about 375,000,000 acres of cropland—about 25,000,000 fewer acres than were tilled before 1934. Anyone considering the current supply of land might conclude that there is no point in conservation—that we now have more land than we need. But the argument for conservation goes far deeper than the immediate need of halting accelerated erosion. We need to conserve our



ANALYSIS OF LAND SUITABLE FOR CULTIVATION

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greatest natural resource, the soil, in order to stabilize farming and guarantee our ability to meet any future demand.

The fact that the available cropland exceeds current use does not mean necessarily that either the demand or the supply is fixed for the future. Erosion, the greatest single factor in soil deterioration, is generally prevalent throughout all our better farming areas, except the Mississippi Delta and part of the Corn Belt.

In fact, the Soil Conservation Service, in cooperation with other technical agencies, estimated in 1937 that only 39 percent of the land classed as cropland in the 1935 census could be indefinitely continued in cultivation under present practices, and that even assuming the use of best conservation practices, not more than 82 percent can be continuously cultivated. According to these estimates, 18 percent of the land in cultivation in 1935 eventually must be retired from cultivation.

Where More Conservation is Needed

Adjustments in land use and the adoption of additional conservation practices are most needed in the Pacific Northwest, in the Northeast, in the Southeastern cotton and the East Central regions. Adjustments and additional practices are needed on the smallest percentage of cropland in the Lake States, the Corn Belt, and the Delta Cotton regions. The cropland needing additional practices ranges from 26 percent in the Lake States to more than 50 percent in four of the regions shown on the chart.

There is not a direct relationship between this percentage and the extent and seriousness of the conservation problem or the devices needed to obtain a conservation balance. For instance, more complex devices are necessary on the lands needing treatment in the Delta Cotton region than in the Northeast.

A higher percentage of cropland must eventually be retired from cultivation in the Southeastern cotton and East Central regions than in the other regions. Only small percentages are indicated for retirement in the Corn Belt and the Lake States. On the other hand, the relative supply of land not now in cultivation but suitable for cultivation is largest in the Delta cotton and Southeastern and East Central regions, with only a small percentage of additional land available in the Southern and Northern Great Plains, the Pacific Southwest, and the Northeast. Some of the additional Western land will be very productive, however, since it can be irrigated.

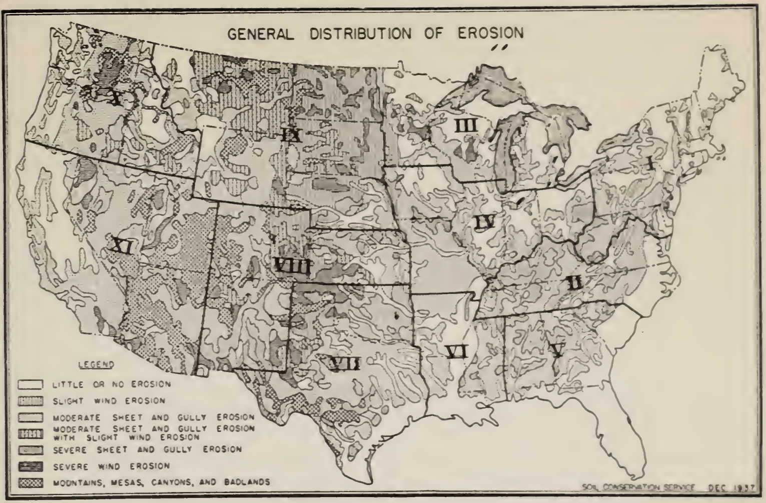
Comparable estimates of the current condition of pasture and range land are not available, but the writer believes a large amount of farm pasture land needs additional conservation measures.

The Forest Service estimated in 1935 that the Western ranges were overstocked almost 60 percent, and that approximately 75 to 80 percent of the 728,000,000 acres covered by their study was subject to continued deterioration and erosion. These estimates seem extreme, but much of the range land undoubtedly is overgrazed and considerable areas need a decrease in the grazing load.

Greater Production May Be Needed

There is good reason to think that some day we may require more production than is demanded today. We are not ready to admit that out foreign market is permanently diminished to its current level. Our population still is increasing; even if it stabilizes at about 150,000,000 with average per capita consumption and with some further increases in crop yields, an extra 25,000,000 to 35,000,000 crop acres eventually may be needed; and finally, a great potential demand for more foodstuffs and more clothing exists among our low-income groups, provided we can find some way of giving them the necessary purchasing power.

Fortunately we have the land to replace any acreage that must be retired sometime, or to meet these additional demands. The Soil Conservation Service estimated more than 100,000,000 acres not in cultivation are suitable for tilling, assuming the use of the best conservation practices and price levels equal to those prevailing in 1921–36. But even if additional demands can be met with new land, it is still desirable to practice conservation in order to save the cost of clearing and draining, to maintain a stable community life, and to maintain current acreages of hay and pasture, because much of the available new land is now pasture land.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SOIL CONSERVATION SERVICE DEC 1937

Progress in Achieving Soil Conservation

Considerable progress has been made in reducing the acreage of soil-depleting crops. In this connection, the Soil Conservation Service has brought about reductions of 15 to 30 percent in some areas, or perhaps 1,000,000 acres all told. But for the whole Nation, there has been a reduction of about 28,000,000 acres in the two principal row-cultivated crops of corn and cotton since 1928–32, chiefly as a result of the agricultural conservation program.

A comparison of the average acreage of the principal soil-depleting crops in 1928–32 and recommendations obtained from technicians in the regional adjustment project, recommendations obtained from farmer representatives in the early county planning project, and the estimated average acreage for 1938–39 are shown in table 1.

The Use of Former Corn and Cotton Land

To what use has the acreage taken out of corn and cotton been put?

A considerable portion of the acreage taken out of soil-depleting crops undoubtedly has been retired permanently from cultivation to pasture, forests, and other permanent vegetative cover. In addition, about 3,000,000 acres of cropland in the United States have been designated as "restoration land" under the agricultural conservation program, and a sizeable portion of the acreage shifted out of corn in the Middle West and cotton in the South undoubtedly has been retired permanently from cultivation. The annual report of the Soil Conservation Service shows that more than 1,000,000 acres of submarginal land have been taken permanently out of cultivation through the land to obtain a conservation balance. For instance, more complex devices are necessary on the lands needing treatment in the Delta Cotton region than in the Northeast.

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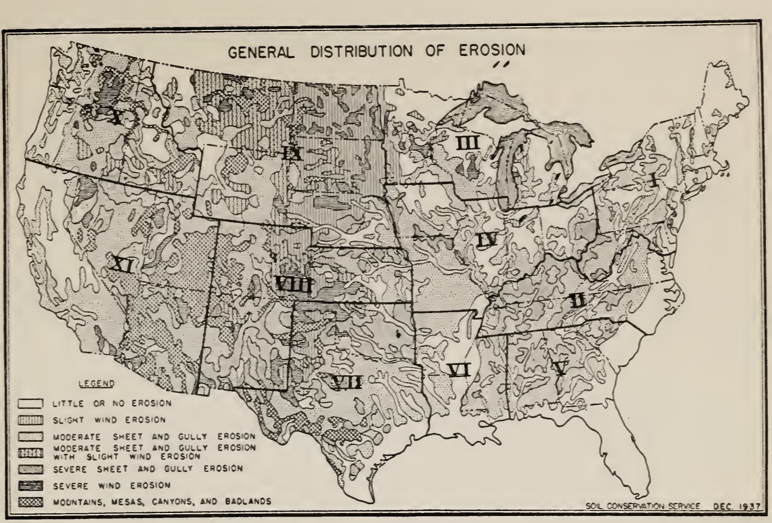
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Table 1.—*Progress in adjusting acreages of principal soil-depleting crops*

Crops	Average acreage 1928–32 [a]	Acreage recommendations [a]		Estimated acreage average 1938–39 [b]
		Regional adjustment	County planning	
		Millions of acres harvested		
Corn	103.4	86.5	94.0	90.1
Oats and barley	52.7	49.4	46.2	45.2
Wheat	60.1	51.7	57.9	61.2
Cotton	40.5	38.4	31.9	24.1

[a] *Acreages recommended for soil conservation and good farm management. Agricultural Adjustment, 1937–38, G–86, Agricultural Adjustment Administration, January 1939. Table 23, p. 161.*

[b] *Crops and Markets, United States Department of Agriculture, December 1939.*

purchase program and a retirement from cultivation of 14 percent or about 1,000,000 acres of cropland on farms cooperating with the Service.

Some data on accomplishments in the application of annual and permanent or semipermanent soil conservation practices and soil amendments have been obtained from reports of the Soil Conservation Service and Agricultural Adjustment Administration, and a survey conducted in 1938 by the Division of Crop and Livestock Estimates at the request of the Program Planning Division of the Agricultural Adjustment Administration. These details are shown in table 2.

Such practices as contour tillage and the use of cover crops are annual practices; terracing, strip cropping, and contour furrowing become a permanent or semipermanent part of the farm operation if properly maintained. Fertilizer applications must be repeated from time to time. Lime must usually be replaced every 15 to 20 years. The estimates in the first two columns of table 2 cover all farms; but the data in the last two columns show only the acreage of practices that farmers cooperating with the particular agency carried out. In general, farmers are making material progress in adopting those additional conservation practices that are needed most.

Suggested Goals for a Conservation Balance

Conservation and good farm-management goals for acreages of specific crops were established in the studies carried on by the Program Planning Division of the Agricultural Adjustment Administration in 1934–36, both with the judgment of farmers and technicians. Acre-

TABLE 2.—*Some soil conservation accomplishments, 1928–32, 1937, and 1938*

Practices	Estimated total acreage		Practices reported for cooperating farmers, 1938	
	Average 1928–32	1937	Soil Conservation Service [a]	Agricultural Adjustment Administration [b]
		Thousands of acres		
Annual:				
Contour tillage	([c])	([c])	2,714	5,493
Cover crops and green manure crops	5,219	11,574	[d] 445	25,243
Permanent or semipermanent:				
Terracing	1,377	2,519	322	891
Strip cropping	([c])	([c])	955	713
Contour furrowing	([c])	([c])	176	[e] 2,275
		Thousands of tons		
Soil amendments:				
Limestone	3,286	6,969	[f] 78	5,019
Fertilizer	6,990	8,139	[f] 25	508

[a] *Practices reported for fiscal year 1938–39.*

[b] *Preliminary estimates, based on data supplied by Agricultural Adjustment Administration.*

[c] *Not estimated.*

[d] *Winter cover crops.*

[e] *Contour furrowing and ridging range and pasture land, and contour and basin listing cropland.*

[f] *Estimated.*

age goals of land suitable for cultivation were established in the estimates made by the Soil Conservation Service and others in 1938. Additional estimates have been expressed regarding the retirement of cultivated land in reports of the National Resources Board.

These suggestions deal with shifts from soil-depleting to soil-conserving crops, retirement of submarginal cropland, and land on which additional or improved soil conservation practices should be used. Altogether, they indicate that the acreage of soil-depleting crops should be maintained at a level about 25,000,000 acres under the average acreage for 1928–32, that some 15,000,000 acres of submarginal land should be retired from cultivation in the reasonably near future, and that perhaps as much as 50,000,000 acres more must eventually be retired.

A more complete report for a region, the Southern Great Plains, was prepared under the direction of H. H. Finnell of the Soil Conservation Service. That report recommends that about 20 percent of the cultivated land be restored to range, that 20,000,000 acres, or 80 percent of the cropland be terraced and contour farmed, that an additional 10 percent be contour farmed, and that approximately 55 percent of the range land, nearly 40,000,000 acres, be contour furrowed. In addition, it is recommended that water-spreading structures be used in connection with 12 percent of this range land.

It would seem desirable to have such goals for each region and for the whole Nation. Such national goals can be roughly set for some practices by using the data for farms covered by soil conservation plans in demonstration projects, C. C. C. camp areas, and soil conservation districts cooperating with the Soil Conservation Service. These Soil Conservation Service figures are compiled from more than 700 work units located throughout the country and represent a fairly good national cross section.

Suggested national goals include:

	Acres
Annual:	
Contour tillage	227,064,000
Cover crops and crop residues	125,873,000
Permanent or semipermanent:	
Retirement from cultivation	49,993,000
Terracing	139,865,000
Strip cropping	108,213,000
Contour furrowing	60,945,000

These estimates are on the basis of practices planned in Soil Conservation Service work areas, as given in the 1939 report of the Chief of the Service, and the ratio of the 20,123,000 acres of farm land covered by such plans to the 1,054,515,000 acres of all farm land.

As to goals for soil amendments, only a rough estimate can be made. It is generally agreed that the greatest need for limestone is in the States east of the Mississippi and Missouri Rivers and in the Pacific Northwest. If we assume that 75 percent of the cropland area, an area of pasture land equal to one and one-half times the plow-pasture acreage should be limed at a rate of 2 tons of agricultural limestone an acre, there is a potential need for approximately 500,000,000 tons of limestone in this area for immediate use to correct soil acidity. Additional amounts will be needed from time to time. Some fertilizer is also needed in connection with the establishment of soil-conserving grasses and legumes, especially in the South, East, and Middle West.

Looking Ahead

Looking into the future, we see several problems for which a satisfactory solution has not yet been developed or obtained. There is need for pooling the efforts of technical experts and farmers in completing the job of setting goals for conservation practices and soil amendments desirable from the standpoint of best land use, considering physical, economic, and social factors. Such goals cannot and should not be considered as final but as guides to measure progress. County and State land-use planning committees could be especially helpful in this field.

In addition, a uniform terminology and system of reporting conservation activities, both with respect to established goals and the progress in achieving conservation, are needed.

Desirable also are techniques in farm planning that will allow the application of conservation principles in the simplest manner possible—that is, a method of farm planning that will allow farmers to determine changes in use, conservation practices, and soil amendments required for each acre and needing a minimum of technical help. At present several action agencies—the Soil Conservation Service and the Farm Security Administration, especially—are directly interested in developing individual farm plans, and the Extension Service and the farm-management researchers have long been encouraging farm planning as a means toward more efficient farm management.

It would seem desirable to develop a simplified and coordinated planning procedure by which the most economical devices for obtaining a soil-conservation balance on each farm could be developed and carried out by the farmers themselves with minimum technical assistance, and which would be useful to the farmers in connection with their participation in such national programs as the agricultural conservation program or the standard loan program of the Farm Security Administration.

Such an endeavor should receive the support of all agencies interested in conservation or the internal organization of individual farms, since conservation objectives are, after all, based upon the hope that all farmers will eventually approach the problem systematically, acre by acre and field by field.

City Growing Pains in the Country

by OMER L. HIRST

WHEN CITY problems move to the country, what happens to the country? More specifically, what happens when a twentieth century city spreads out over part of a rural country whose governmental machinery has undergone few fundamental changes since the Civil War?

The rise of the city and the growth of the area around it have been phenomena of great social, economic, and political significance in American history. Much has been written about the many problems that have followed the trend toward urbanization, but a word remains to be said about the problems that confront a farming area as the metropolis reaches out and gradually engulfs it.

This is an account of some of the experiences of a Virginia county that has been—and still is—in the throes of growing pains because of the enlargement of its neighbor, the National Capital.

Fairfax County, in northern Virginia, had a population in 1930 of some 25,000 persons. Its area is 417 square miles. Half the county lies well within easy commuting distance of Washington, D. C., and is being suburbanized rapidly, but the other half is still devoted primarily to agriculture. There are some 1,500 farms in the county; it ranks second in Virginia in value of dairy products and stands high in poultry production.

From this dual nature has come a conflict of city and rural interests.

Most of Revenue Comes From Real Estate Taxation

In Virginia, the revenue derived from the taxation of real estate is segregated for the use of local government; 69.5 percent of Fairfax County's income in 1937 came from the taxation of privately owned real estate, and about 16 percent came from the taxation of the real estate of public utilities.

The assessed valuation of the real estate owned by public utilities in a given county is certified to that county each year by the State corporation commission, which regulates public utilities. All other real estate in the given county is assessed by that county; the usual method is to make a physical assessment periodically and to adjust that assessment from year to year according to changes like additions, fire losses, and divisions.

The Virginia constitution specifies that all taxable real estate shall be assessed at its fair market value, but the State corporation commission holds that this provision is not followed generally by the various assessment jurisdictions, and that therefore the real estate of public utilities shall be assessed on the basis of a State-wide average.

The use of such an average, which has been estimated in recent years to be 40 percent of the fair market value, recognizes the prevailing lack of uniformity in the assessment procedure and also establishes a definite limit above which the percentage of fair market value at which privately owned real estate is assessed equitably cannot go.

Five Towns Complicate the Situation

The assessment situation in Fairfax County is further complicated by the five incorporated towns within or partly within the county. Three towns are suburban and two are in the farming area. Their total assessed valuation is approximately 16 percent of that of the whole county. Besides the real estate taxes collected by the county, each town places an additional levy on the real estate therein, to provide revenue with which to pay the cost of the town government.

But in taxing that real estate, the town must use the county's assessed valuations. Further, the town cannot legally issue bonds to a greater amount than a specified percentage of the assessed valuation of its real estate.

In the case of the town that is now growing most rapidly, that limit is 18 percent. Thus it is easily seen that the rapid growth of such a town and the accompanying demand for governmental services can bring serious problems if the increase in assessed valuations is allowed to lag far behind the increase in real-estate values.

As a matter of fact, real estate in Fairfax County is still being assessed on the basis of an assessment, conducted in 1930, in which each assessor had to appraise some 80 parcels a day.

Assessed Valuations and Sales Values

The most authoritative report on the assessment situation in Fairfax County is the result of a survey, undertaken in 1936 by the State department of taxation, to analyze each recorded real-estate transfer and to compare the sale price with the assessed value.

Approximately 1,600 transfers were recorded that year, but in reaching its conclusions, the State department of taxation disregarded about 400 believed to be extreme cases.

It was found that the average assessed value was 24.66 percent of the sales value, but the individual assessed valuations ranged from 2 to 250 percent of the selling prices.

Reliable figures showing the increase in population since 1930 are not at hand, but especially significant are trends in school enrollment and costs, because about two-thirds of county expenditures each year are devoted to education. The enrollment for the 1939–40 school year is 49 percent above that for 1931–32. During that period, 1931–39, school property values increased 108 percent, and the school budget 67 percent.

The real estate valuation placed by the county did not increase so rapidly; the assessed valuation in 1931 was $11,342,204 and $13,652,315 in 1939, an increase of 20 percent. This increase was due to improvements because there has been no reassessment of land since 1930, although many land values have increased tremendously.

What this increase in expenditures, without a comparable increase in the tax base, has meant for much of the farming section becomes apparent when one examines the tax rate in Dranesville district, the most agricultural of the county's six magisterial districts.

Farm Production and the Tax Rate

In 1932 the tax rate per $100 of assessed valuation in this district was $2.80; by 1939 it had climbed 12 percent to $3.14. Yet it is estimated that if State-wide averages are valid for Fairfax County, the value of farm production possibly has decreased as much as 20 percent since 1930. (The farmer's plight is not quite so bad as this might indicate, because the average general-purpose farm, if at all suitable for a country estate, can usually be sold for more than is justified by its earning capacity. But this is little consolation to the farmer who wants to keep land he has owned for years.)

Suburban residents demand school improvements and a general extension of governmental services. They criticize overcrowded schoolrooms and school busses and sometimes inadequate fire protection, and demand sound planning and zoning laws and many other improvements expected in a prosperous area. They argue that it is not their fault that a model-T assessment machinery cannot catch up with V–8 conditions, and that their children are in school today, not a decade or two hence.

Suburbanites and Farmers Alike Complain

The farmers say they are tired of educating city people's children. They contend that the rapid suburbanization in the other end of the county has meant mostly a rise in the wages they have to pay their help, tax increases, and a general complication of the county government problems. They maintain that the increase in expenditures is caused largely by the rapid growth of the suburban part of the county and that they are paying more than their fair share of the bill.

Irrespective of these arguments about spending and not spending, it is apparent that the county's tax-gathering machinery is not geared to reach the steadily rising real-estate values in much of the county as the increases occur, and that the existence of this situation is an indictment of the assessment procedure that has been followed in most Virginia counties.

An appreciation of the seriousness of the assessment problem led the Fairfax County Chamber of Commerce to make it a topic of study, in the course of which a committee examined assessment procedures in Washington, D. C., and Henrico County, Va., which is just outside the city of Richmond and has an up-to-date assessment system operating under conditions similar to those in Fairfax County.

Recommendations Are Made, But Action Is Slow

The committee made several recommendations. These included a further investigation of the value of a real property survey to obtain an adequate file of assessment information, including tax maps; the need of an improved building-permit ordinance to facilitate the proper assessment of newly constructed buildings and additions; careful selection of assessors on the basis of professional qualifications; a citizen's advisory committee on reassessment to continue the study and to try to effect greater cooperation among public officers, boards, and commissions concerned with different aspects of the assessment procedure (under the existing system, some eight of them may have some part in assessing and taxing a piece of real estate).

The recommendations were made to the county supervisors in January 1939, one year before the required real-estate assessment in 1940, but no action was taken except on the creation of the suggested citizen's advisory committee. In November 1939, however, the supervisors authorized the preparation of improved assessment cards that would give the assessors many details concerning sales prices, previous assessments, acreage, and ownership, and would provide for collecting exact information on improvements.

Aerial Maps Authorized

The cards previously used did not mention the nature or condition of the improvements, but merely gave a lump-sum assessment for all the improvements on a particular property. Probably the new card system will be of great value in future assessments and in hearing appeals from the assessors' judgment.

The board also authorized the use, as a substitute for tax maps, of aerial photographic property maps which, it is hoped, will be the beginning of an atlas system that will be helpful to assessors and the planning and zoning commission alike.

Suburban residents look to the 1940 assessment to enlarge the real estate tax base and thereby make more money available for schools and other governmental services. Farmers hope it will enlarge the tax base and ease their tax burden by increasing suburban assessed valuations and leaving farm assessed valuations about where they are now.

The fulfillment of these hopes depends largely on the quality of the current assessment, which in turn depends largely on the preparations made to insure a good assessment.

Of great importance is that the scattered responsibilities for different aspects of the assessment function be centralized and clearly delegated to the board of supervisors, with the necessary authority to insure that it will be discharged effectively.

Assuming the adequacy and efficiency of assessment machinery, what would be the effects of applying the basic rule of fair market value, as required by the State constitution? How would its application affect farm real estate, suburban real estate, timberlands, and lands abandoned for farming?

The Influence of Speculation

Answers to these questions would be greatly influenced by the location of a parcel of real estate—if a farm is in the suburban area, it is probable that its fair market value will be substantially above that reached by capitalizing earnings. Its owner is both a farmer and unconsciously a land speculator, and to assess his farm on the basis of its agricultural productivity and to disregard its speculative possibilities for residential and commercial development is to subsidize that farmer in his speculative activities and to increase the tax burden on the other land owners.

On the other hand, in cases where fair market value can be obtained only on the basis of ability to produce, those farms might be assessed substantially lower than before. In other words, the application of the rule of assessing at fair market value would recognize the difference between the farm whose only value is based on what it will produce and the farm whose value depends on its possibilities as a subdivision.

When the Virginia State Planning Board undertook to compare land classes and tax delinquency in Fairfax County, it found that poor farm land—land that should not be farmed at all—had the highest delinquency rate of all land classes in the county. In most cases the logical use for this land is to allow it to return to forest, and so under the fair-market-value rule such land would be assessed at an even lower value than land that already has a crop of timber growing on it. (Timberland in Virginia is taxed each year at assessed value; the severance tax employed in some States is not used.) Here again, however, fair market value would differentiate between land that is not being farmed because it is too poor and land that is not being farmed because it is too expensive.

In assessing suburban real estate, the rule of fair market value alone possesses sufficient flexibility to permit adjustments for the possible rapid changes. Real-estate values in an area that is being suburbanized rapidly are subject to fluctuation, for the construction of an arterial road into the city, the increase in service facilities, like gas and water, and other improvements can have an immediate and decided effect on suburban real-estate values.

The rule of fair market value, if applied intelligently and consistently, can have good results under these conditions.

COMMUNICATION

Sir:

Upon call of Morris Llewellyn Cooke, 52 citizens of 38 States on March 22 and 23 in Washington organized to support and forward the unified conservation of "soil, rain, and man." With Mr. Cooke as president, and a board of 40 trustees, "Friends of the Land" will publish a monthly magazine, "The Land," maintain a Washington office and field auxiliaries, and seek to advance the idea that conservation is an essentially coordinated undertaking, both here and abroad.

Organized outside of the Government, the new society will seek subscriptions and backers among citizens in general, both within the Government and without. The aim is nonprofit, nonpartisan, nonfactional.

Mr. Cooke was the first administrator of the Rural Electrification Administration, and on the Mississippi Valley and Great Plains committees. Russell Lord was named editor. R. G. Tugwell, Paul Sears, Dr. Isaiah Bowman, Stuart Chase, Aldo Leopold, J. N. Darling, and Dr. J. Russell Smith are on the board of trustees.

Gerald W. Johnson, author of The Wasted Land, wrote this about the meeting:

"Whether or not the Friends of the Land are taking the best approach to their problem is debatable. They are not at the moment pressing any specific program of legislation. They are attacking, rather, the problem of public ignorance and inertia. This is most difficult, but it has the advantage of being a frontal attack. If the American people were actually informed and alert, then programs of legislation would be merely matters of detail. The question comes to a matter of time."

Further information can be obtained from "Friends of the Land," 312 Denrike Building, Washington, D. C.

Sincerely yours,

Charles W. Collier,
Executive Director.

At the beginning of 1940, the operator had 91 animal units. He had reduced the mortgage to $1,900, and it had been taken over by a local bank.

From Near-Bankruptcy to Solvency

The operator struggled for 10 years and failed under the former system of insecurity of tenure, improper land management, and scattered holdings.

In 2 years, under a system of security of tenure, proper land management and well-aligned holdings, the operator progressed from a state of near-bankruptcy to solvency.

Land purchase and development, the institution of a grazing district and its management program, has made it possible to stabilize this unit. The local grazing district allotted the range lands, designating Mr. Henninger's present set-up. That action eliminated competitive bidding and established security of tenure. Through the range survey and the educational program a realization of the productive value of the land has been accomplished.

Security of tenure allowed proper management plans to be instituted. The operator now uses a complete grazing rotation and stocks the range properly. Under this system the range has improved approximately 95 percent faster than surrounding uncontrolled range. Ample grass and water, under proper management, is reflected in the high percentage of calves and top prices for high quality produce. Land values have been stabilized. There is now an incentive to own and control land because, under proper use, it will produce a livelihood for the families remaining in the area.

In Later Issues

"Land Clearing in the Pacific Northwest" is the title of a forthcoming article by Willard W. Troxell and Harry J. Voth. It supplements "Stump Ranching" in the current issue with more detailed information about methods, machines, contracts and costs of this increasingly important work.

Fred A. Clarenbach, associate agricultural economist in the Division of Land Economics, Bureau of Agricultural Economics, has written a significant article on local government reorganization, with especial reference to the Ozark region of Missouri.

"There is much truth in the view that neither an individual nor a governmental unit can long maintain its independence when it cannot pay its way," he writes. "The typical Ozark county cannot pay its own way so long as it is burdened with functions that today belong to the State."

Design for Policy-Making

by HELEN HILL MILLER

JUST WEST of Des Moines, on some of the best land in the Corn Belt, Dallas County typifies commercial scientific farming in high gear. Come September, stockmen listen to midnight radio returns of arrivals at Omaha; when the market seems right, they jump into fast sedans and drive 100 miles before daybreak to take their pick of feeder cattle on the spot when the bidding opens. And they buy up to 600 head at a time.

The average farm is 160 acres; 95 percent of the corn grown in the county is hybrid corn; the fields along the highways sport signs advertising the breeders: De Kalb, I. S. C. Hybrids, Pioneer. The ears on Pioneer 307 are borne at such a uniform height from the ground that they look like a fence panel when seen at 50 miles an hour.

Much of the farm work is tractor-done—big fellows with floodlights for night driving. The third, and in dry years the second, crop of alfalfa is mechanically mown, baled, and trucked from the field in a single afternoon.

The steers and the hogs are fed out of cribs that hold up to 20,000 bushels; they are also fed out of Henry & Morrison, whose "Feeds and Feeding, A Handbook for the Student and Stockmen" is standard farm equipment. These stockmen are students—many of them are graduates of Ames. They know what experiments at what stations are yielding what results. They talk in terms of proteins, vitamin deficiencies, carbohydrates. The most commercially minded among them belong to business associations, which provide central auditing of books—they know their returns per animal unit and per man-hour.

There are only a handful of towns in the county—the county seat and a few shipping points—and the institutions in these centers depend on the surrounding farms. The people on the governing bodies of church, school, and bank are farmers. Through cooperative elevators they have cut margins considerably.

Above the Locker, A Hall

In one town, a merchant recently built a cold-storage locker in connection with his meat and grocery business. Neighbors rent individual drawers in the locker, whose February contents may number fish caught last summer in the river, or bright strawberries from September's everbearing bed.

The space above this locker is the hall where the Dallas County Agricultural Forum meets: For all this efficiency has not left Dallas County without problems.

The pressure of population on the land, the competition of farm families for acres to farm, is acute. On March 1, moving day for Middle Western tenants, *Wallace's Farmer* estimated that 2,000 Iowa farm families were turning uncertainly toward the cities because they could not find a place on the land, and Dallas County contributed its quota to these dispossessed. A traveler in the county hears rumblings that there ought to be a law, that the renting or purchase of additional acres by those who already have farms ought to be heavily taxed.

For those who own or rent farms, operating capital is hard to find, or if not hard to find at any rate hard to pay for. More than one able operator is known by his friends to be "right up against the buzz saw" at the bank. And the more commercial efficiency is put into farming, the greater the farm's sensitivity to prices. Outward signs of the pressure that the big, low-priced corn crops of the last few years are exerting are the bright, round galvanized bins of sealed corn that give the larger farms the appearance of oil refineries; behind these bins around the farmstead stand skeleton windbreaks, drought-killed in 1934 and 1936.

In the Hall, Initiative

Individual economic efficiency is not enough. Farm-population problems, farm-credit problems, farm-price problems require collective treatment. Realizing this, Dallas County farmers have participated largely in the national farm programs. But they have realized something more. They have realized that in a democracy, initiative in these matters must be taken by the citizens, and that initiative begins at the county level.

The Dallas County Agricultural Forum was begun by a group of Dallas County farmers who felt that their political representation could be improved. As a first step, they decided to bone up themselves on the major national issues affecting the farm. They divided up the job, and when they were ready they issued invitations to all the political candidates for the forthcoming election.

The candidates were not allowed to make speeches. They were given an opportunity to answer questions. The members of the forum did the questioning. When the meeting was over, those present had a fairly clear idea of who were the trimmers, who were the ignorant, who were the mongers of catch phrases, who were the well-informed. And who dodged the meeting. The forum itself took no political stand. It merely commended its members to the guidance of their own consciences, in the light of what they had heard.

From this beginning, the forum turned its attention to further exploration of national issues. During the past year, meetings have been conducted on means of supplying credit for Farm Security Administration clients; on the chemurgic movement and its prospects of industrial uses for farm products; on the reciprocal trade agreement program; on neutrality; on the question, "Is the farm program an economic necessity?"

A Different Adult Education

This is adult education with a difference. Members of the Dallas County Forum—and membership is open—are not consumers on the receiving end of public policy. They make use of materials—books, statistics, pamphlets, issued from a variety of sources. They import occasional specialists—technicians from Ames, journalists from Des Moines—to present short statements before the forum starts. But the forum is self-starting. And once it gets going on a subject, it is on the producing end of public policy.

For some years we have had primaries for candidates for government office, on the ground that it was well for the people as a whole to sort out the candidates, rather than rely on a small party caucus to name the man.

But it is only now that we are creating institutions to serve as primaries for the policies that candidates, when elected, put into effect. The caucus system, outgrown in respect to people, is still in use for ideas. Nominations for public policy are still largely made either by pressure groups, or by advisers to the executive. Such caucuses represent either constituencies of special interest, or no constituency at all.

This caucus system is in force by default, default of the general citizenry to develop a general will in respect to the general welfare. The members of the Dallas County Agricultural Forum are not defaulting. In the course of the past few years they have been over the major national issues with which they have first-hand experience. They believe that the quality of their legislative representation has been improved by their technique.

They are now wondering to what extent the same technique is applicable to the personnel of the administrative agencies active in their area.

The Migrants

This article is the fifth of a series about migration to the Pacific Coast States. It is based on data from surveys undertaken by the Bureau of Agricultural Economics in cooperation with the Idaho and Washington Agricultural Experiment Stations.

V. "Stump Ranching"

by MARION CLAWSON, DAVIS McENTIRE, C. P. HEISIG

DURING THE 1930's many farmers settled on cut-over lands in western Montana, northern Idaho, northeastern Washington, western Washington, and western Oregon. The low cost of these lands and the opportunity to start farming with little capital appealed to many who were unable to find employment elsewhere and who lacked sufficient capital to purchase land in developed farming areas.

Estimates are that about 460,000 persons moved into the Pacific Northwest (Oregon, Washington, and Idaho) in 1930–38. Approximately half of them settled in rural areas. Undoubtedly many thousands settled in cut-over areas, but the exact number is not known.

Only a part, however, of the total recent settlement on cut-over lands is by migrant families from other States. Many of the new settlers came from Pacific Coast cities, seeking an alternative to unemployment. Others were farm tenants and laborers in nearby areas.

439 Families Are Studied

To determine the economic situation of these settlers and appraise the opportunities afforded by settlement on cut-over lands, studies were made in 1939 in two areas in northern Idaho and five in western Washington, where every resident family was enumerated and records were obtained from 267 families, including 151 who settled after 1929 and 116 who had been on their farms from 10 to more than 30 years. In northern Idaho records were obtained from 172 families, all but four of whom had settled there since 1929.

In all the five Washington areas the population from 1930 to 1939 increased more than 100 percent and in two the increase was more than 200 percent.

Thus, in the latter areas, fewer than a third of the families had been there in 1930. A few families may have moved out since 1930 but the outward movement generally has been small. Of the families who settled in these localities since 1929, 31 percent were in the same county before 1930. An additional 24 percent were in other Washington counties before 1930. Thus, more than half of the recent settlers in the five places came from within the State. Of the interstate migrants, about half came from the Great Plains and slightly more than a fourth from Pacific and Intermountain States. In northern Idaho, more than 60 percent of the settlers came from the Great Plains.

TABLE 1.—*Families settled before 1930 and still in area in 1939, and recent settlers, 5 areas in western Washington*

Area	County	Settled before 1930	Settled from 1930 to Apr. 1, 1939	Total families in area, Apr. 1, 1939	New settlers, percentage of older settlers
Yacolt	Clark	59	125	184	212
Salkum	Lewis	93	99	192	106
Duval	King	39	97	136	249
Monroe	Snohomish	117	164	281	140
Getchell	do	120	138	258	115
All		428	623	1,051	146

Families of the new settlers (since 1929) averaged 4.3 persons in northern Idaho and 3.9 persons in western Washington. The new settler families have relatively more young people and fewer old people than are found in either the farm population or the general population of the Pacific Northwest. Nearly a third of all persons in the new settler families of northern Idaho were under 15 years, while fewer than 10 percent were more than 55 years old. However, nearly half of the family heads are more than 50, and therefore, in many cases, the ultimate clearing of the farm will depend on the younger members of the family.

From Tenants and Laborers to Owners

Settlement on cut-over land often has meant a shift from a tenant or laborer status to farm ownership. Fewer than a third of the northern Idaho settlers had been farm owners before moving to their present places; 40 percent had been either renters or farm laborers; 30 percent had been engaged in nonagricultural work. On the cut-over land, however, 90 percent were owners or purchasers on contract; nearly four-fifths of the former tenants and farm laborers had become owners while all of the former nonagricultural group were buying farms. Ownership consisted, however, of an equity in an undeveloped "stump ranch."

The Washington localities typify conditions common to the cut-over Douglas fir region west of the Cascades. Except in the higher mountain areas, most of the timber in this region was logged off more than 30 years ago and land clearing for agriculture has been in progress ever since. The many stumps are large and decay very slowly; agricultural development therefore has been slow. Most farms still have uncleared land within their boundaries, and many extensive areas are in practically the same condition now as when the timber was first removed. In northern Idaho, however, the stumps, mostly pine, are smaller and rot more readily. Clearing is easier and more can be accomplished with limited means. Even here, however, agricultural development has been slow and the land is largely still covered with stumps, brush, and second-growth timber.

Nearly 60 percent of the settlers in northern Idaho and nearly 40 percent of those in western Washington obtained less than 1 acre of cleared land at time of settlement. Only a few have had the capital to buy or rent improved farms. The quality of soil on these farms varies.

Anyone driving through the cut-over areas would wonder how these people make a living at all. The present study reveals a high degree of dependence on nonfarm income by nearly all settlers. Net family cash receipts in 1938 averaged $500 for settlers on new farms in western Washington and $491 for the northern Idaho settlers. In western Washington, cash farm expenses on farms settled since 1929 exceeded cash farm receipts so that these new farms (on the average) contributed less than nothing to the settlers' family cash income, although appreciable noncash contributions were made by the farm to family living.

64 Percent of Cash Receipts or Less From Farms

The uniformity in the amount of net family cash receipts reported by farmers in the different sizes, types, and age groups of farms is surprising. On a few relatively large, old farms in two sections of western Washington were operators able to obtain somewhat higher incomes than were operators on other farms. With these exceptions, the net family cash receipts averaged between $400 and $600. Settlers on the smallest and least developed group of farms received approximately as much cash income from all sources as did operators of larger, older, more developed farms.

The explanation of this relative uniformity of cash income lies in the sources from which these funds were obtained. On the larger and older farms approximately 64 percent of the net family cash receipts came from the farm itself. The smallest and least developed farms, on the other hand, contributed less cash than was spent for their development, but the families received more than half of their income from public assistance (WPA, CCC, direct relief, etc.). Off-

TABLE 2.—*Distribution of farms by number of acres cleared at time of settlement; all settlers who moved to present farm since 1929*

Number of acres cleared at time of settlement	Western Washington		Northern Idaho	
	Number of farms	Percent of total	Number of farms	Percent of total
0–0.9	56	37.1	97	57.1
1–2.9	41	27.1	13	7.6
3–6.9	16	10.6	13	7.6
7–14.9	19	12.6	13	7.6
15–29.9	11	7.3	14	8.3
30 and more	8	5.3	20	11.8
All farms	151	100.0	[a] 170	100.0

[a] *Includes 4 settlers who settled before 1930, not separately tabulated.*

TABLE 3.—*Selected measures of farm organization and income, new and old farms in western Washington and new farms in northern Idaho*

Item	Western Washington		Northern Idaho
	Old farms [a]	New farms [b]	
Number of farms	148	119	[c] 172
Size of farm, acres	77.4	37.5	95.7
Crop land, acres	16.9	2.8	11.9
Productive animal units	11.5	3.9	3.6
Horses and mules	1.5	.5	1.2
Cash receipts 1938: [d]			
Cash farm receipts less cash farm expenses [e]	$185	$−45	$69
Off-farm employment (nonrelief)	202	225	320
Public assistance	76	256	55
Other cash receipts	77	64	47
Net family cash receipts	540	500	491

[a] *Farms developed before 1930.*

[b] *Farms developed in 1930 or after.*

[c] *Includes four farms developed before 1930 but not separately tabulated.*

[d] *For western Washington, Apr. 1, 1938, to Mar. 31, 1939.*

[e] *Farm cash receipts less expenses, but not including inventory changes, interest, or depreciation.*

farm employment was important for all groups of farms, but its relative importance varied from 23 percent of total income on the group of largest farms to nearly half of the income received by operators of the smallest farms. Net cash receipts from the farm varied much more than receipts from off-farm employment. Public assistance also varied widely among different groups of farms but total receipts from all sources were remarkably consistent.

A somewhat similar situation prevailed in northern Idaho, although public assistance was much less important there than in western Washington. Less than a fourth of the Idaho settlers received public aid, and such assistance contributed only about 11 percent of the net cash receipts of the group. For the Idaho settlers as a whole, net cash receipts from farming amounted to less than one-seventh of the total cash income from all sources.

The settlers earned nearly two-thirds of their cash income through off-farm employment. However, the relative importance of both off-farm employment and public assistance declined considerably with increased length of settlement, as settlers were able gradually to clear land for farming. Net cash receipts from the farm increased from less than nothing in the group of smallest and least developed farms to more than $500 for farms with 30 acres or more cleared land.

The Part of Public Assistance

A larger proportion of the Idaho settlers had extremely low incomes and a larger proportion received relatively higher incomes than was true of the western Washington group. In part, the greater uniformity of western Washington incomes probably reflects the leveling influence of public assistance. In part also, the difference is attributable to a wider range in number of cleared acres among the northern Idaho farms.

Besides cash receipts, many settlers increased their crop and livestock inventories from $10 to $250. The majority were also clearing land and making other improvements to their farms. Products from the farm, important noncash items in the family living, were valued at $200 to $300 for most groups of farms. The farms with little or no cleared land produced much less than this, while the larger and older farms supplied the family with a larger share of their living.

Poor Houses, Slow Progress

Living conditions in these cut-over areas are poor. The typical dwelling is a log or rough board structure with three or four rooms, unpainted, an unfinished interior, and a shake roof. The number of rooms per person was 1.0 in western Washington and 0.8 in northern Idaho. Only 8 percent of the farm homes in northern Idaho and 21 percent of those in western Washington had running water in the house. Few had bath rooms.

Progress on stump ranches is generally slow. An undeveloped cut-over farm does not provide a livelihood, and, unless the settler has substantial capital resources, he must find employment of some kind. If he works away from the farm, he cannot clear much land. In any case, some cash is needed for clearing. More than 30 percent of the new settlers in western Washington and 27 percent of the Idaho settlers had cleared no land at all since settlement.

For those settlers who were clearing land in western Washington, the modal rate of clearing was from one-quarter to three-quarters of an acre a year. Fewer than 30 percent were clearing more than an acre per year, and only 2 settlers out of 151 had succeeded in clearing 5 or more acres annually.

Relatively little clearing can be done by the farmer and his family without expensive machinery. Recent years have witnessed the development of machine methods of clearing land with resulting material reduction in costs. Studies of clearing costs indicate that western Washington cut-over land can be cleared by machines at a cash cost of $20 to $80 an acre depending on the density, size, and age of stumps. Machine clearing, however, requires a cash outlay which most settlers are unable to afford. Consequently, they either clear not at all, or using old-fashioned methods requiring little cash but much labor, gradually work the stumps out of a half acre or so a year.

To Clear 1.7 Acres or Less a Year

Settlers in northern Idaho were clearing at an average rate of 1.5 acres a year or about three times as rapidly as western Washington settlers. The cost of clearing averaged $20 an acre. Of this about $6 was a cash cost. The rate of clearing was influenced considerably by presence of work horses on the farm and by loans from the Farm Security Administration for buying blasting powder. Settlers who had neither work horses nor powder loans cleared only 0.6 acre annually on the average. Settlers with horses but not powder loans cleared 1.5 acres a year, and settlers with both horses and powder loans averaged 1.7 acres. More clearing was done on farms on which there was a large supply of family labor than on farms where family labor was unimportant.

Farmers who settled on cut-over land since 1929 averaged 11.9 acres of crop land per farm in 1939 in northern Idaho and 8.8 acres per farm in western Washington. Farm management studies indicate that an adequate size family farm in these same areas should have from 30 to 60 acres of crop land, depending on quality of the soil. On the basis of observed average rates of clearing, from 10 to 30 years

TABLE 4.—*Distribution of farms by number of acres cleared per year since settlement; all settlers who moved onto present farm since 1929, western Washington and northern Idaho*

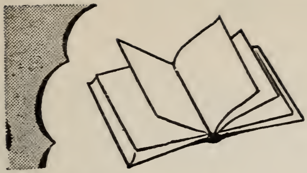
Number of acres cleared annually	Western Washington		Northern Idaho	
	Number of farms	Percent	Number of farms	Percent
None	46	30.4	46	27.0
0.01 to 0.24	14	9.3	17	10.0
0.25 to 0.49	22	14.5	11	6.5
0.50 to 0.74	19	12.6	11	6.5
0.75 to 0.99	6	4.0	10	5.9
1.0 to 1.49	14	9.3	28	16.5
1.5 to 1.9	11	7.3	10	5.9
2.0 to 2.9	8	5.3	13	7.6
3.0 to 4.9	9	6.0	13	7.6
5.0 to 9.9	2	1.3	8	4.7
10.0 and over	....	....	3	1.8
All	151	100.0	170	100.0

would be required to clear a family size farm in northern Idaho and from 25 to 50 years to clear one in western Washington.

Comparatively few of the present settlers will ever live to see their farms fully improved, unless some means is worked out for more rapid clearing than settlers have been able to attain thus far.

The rehabilitation of these settlers as self-supporting farmers depends on increasing their ability to clear land; the use of large machinery for land clearing has not materially helped the new settlers because they cannot pay cash for clearing. The Farm Security Administration has made loans in northern Idaho for the purchase of blasting powder and has financed a cooperative machine clearing association in one county in western Washington with apparent good results, but the scope of these measures has been very limited thus far.

A more general program for Government aid in clearing land, with a repayment plan similar to that now in effect for irrigation projects would place the settler on cut-over lands in a very much more favorable position than he now is. At least it should permit substitution of income from farming for income now received from public assistance.



Books

Farm Appraisal: Classification and Valuation of Farm Land and Buildings. *William G. Murray. Ames, Iowa. The Collegiate Press, Inc. 254 pp. 1940. $2.25*

By S. W. Mendum

THIS BOOK is a college text replete with specific helps from the author's long and varied practical experience in agricultural finance. It is, moreover, adapted to personal study in the way of catching up on the newer requirements of appraisal procedure. The information that a qualified appraiser must now bring to current assignments is vastly greater than that called for perhaps as recently as 20 years ago.

The plan of the book is to take the reader through the individual steps in actual appraisal procedure as the most effective way of presenting the principles. Making an inventory of physical resources on a farm is discussed first, and the translation of this inventory into dollar value second. Three farms on different levels of productivity are cited to illustrate points of practice and the reader is urged to read with reference to some farm of his own selection for practice. Each chapter suggests one or more problems and each has its list of references. There are 12 appendix sections including tabulated general information and forms.

The 18 chapters describe in detail what to do at each step, how to do it, and why one school of appraisers differs from another when there is more than one choice. At most steps, it seems that the instructions are primarily for the purpose of practice, in order that the learner's judgment may be correctly built up. For, after all, an appraisal is "a judgment or estimate and not a measurable fact."

Having examined the description to be sure that the appraisal to be made will be that asked for, and having mapped the farm and rated its crops, soils, and other evidences of productivity or lack of it, it is necessary to apply appropriate prices to products and to estimate the future expenses. As to prices, for example, "for farm X a set of prices equivalent to corn at 60 cents a bushel gives a production value of $150 an acre; at 50 cents a bushel a value of $114." As to taxes, "a record of the past is desirable insofar as it points out the 'most likely' tax in the future."

Practical Farming for Beginners. *H. A. Highstone. Harper and Brothers. New York. 198 pp. 1940. $2.50*

By Donald R. Rush

A VERY readable and practical treatise on farming for beginners has been written by Mr. Highstone. The cautions and advice given would prevent many of the disastrous experiences and failures now common among city folk who endeavor to achieve independence through the purchase of a piece of land. As the author indicates, "To know and to understand the reasons behind these failures is to have taken the first step toward success."

It is common knowledge among agriculturalists that urban people have an almost universal tendency to minimize the skills, techniques, and understanding needed to operate successfully even a small farm. This tendency is fully considered and is the basis for much of the discussion. Reading this book should convince the most enthusiastic and inexperienced would-be farmer that "rural independence is achieved by no easy, automatic process."

The discussion of the procedures and techniques of farming is well done in simple, direct language. The author discusses some of the basic procedures used in the production of hay and grain and in caring for livestock which are "so simple and so thoroughly understood by all farmers that they are almost invariably omitted from farm bulletins and books." Specific sources of technical information on a particular enterprise are given. The correlation of the discussion in the text with material available from other sources is particularly good. The author constantly advises the beginner to follow closely the instructions and advice contained in bulletins of the Federal and State Departments of Agriculture. He states that short cuts and deviations are unwise and often cause disaster to a particular enterprise. He warns further that the basic knowledge contained in his book is necessarily an abbreviated outline and would serve only to get one into trouble if a person attempted to use it as a textbook.

The author's contention that "truck gardening and chicken raising appear simple on the surface, but actually they are far more complex and time-consuming than growing hay and grain, or managing livestock" is well taken. The prevailing impression among beginners that a small chicken ranch or truck garden will provide a good living with a relatively small investment justifies devoting a chapter to each of these enterprises. Mr. Highstone does not minimize the place that poultry and a garden have in the organization of a self-sufficient farm, but he makes some very pertinent and shrewd comments on the fallacy of believing that these enterprises are an easy road to financial independence.

Contributors to this Issue

W. F. Watkins has had long experience in conservation work. After graduation from Iowa State College with a master's degree in soils, he was employed by the Government as a conservationist in Iowa. Then followed 4 years of farming. He was a member of the Soil Conservation Service when he joined the Bureau of Agricultural Economics last year as principal soil conservationist.

Before becoming chief program analyst in B. A. E., Raymond C. Smith was the director of Region III, Farm Security Administration. Proposals for a rural-conservation works program developed by an Inter-Bureau Coordinating Committee under his chairmanship, have been accorded wide attention.

Two members of the Division of Farm Management and Costs, B. A. E., contributed book reviews to this issue, S. W. Mendum, senior agricultural economist, and Donald R. Rush, agricultural economist.

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Dr. Helen Hill Miller is a farmer, operating 70 acres in Fairfax County, Va., and specializing in hybrid corn and cattle; a student of political science and sociology, with degrees and diplomas from universities in Chicago, Oxford, and Geneva, and a senior agricultural writer in B. A. E. She finds time also to teach a course at St. John's College, Annapolis, Md.

"Some of the changes referred to in my article touched me very closely," writes Omer L. Hirst. "When I was a high-school boy some 12 years ago, I spent the summer vacations doing farm work on neighboring farms. Today the farms in my community are nearly all gone, and while I still live in the same house in which I was born, I now sell real estate for a living, and the high-school boys now work at filling stations or get part-time jobs in the city." He was the head of the chamber of commerce committee referred to in his article, and secretary of the Citizen's Advisory Committee on Reassessment. He lives near Alexandria, Va.

Marion Clawson, until recently a member of the Division of Farm Management and Costs, B. A. E., stationed in Berkeley, Calif., is now field representative of the Columbia River Joint Investigation. C. P. Heisig is acting leader of the far Western area of the Division. Davis McEntire is the leader of the Division of Farm Population and Rural Welfare at Berkeley.

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Government Reorganization in the Ozarks

by FRED A. CLARENBACH

THE INCREASING complexity of modern life has broadened the range of essential governmental activities. There are extensive programs for the positive promotion of business and agriculture; billions are spent by American governments for relief and welfare activities in behalf of their citizens. These more recently developed functions are financed and administered or controlled largely by the Federal Government, for the problems require attack upon a national scale and the means of financing such activities are, in practice, available only to the Federal Government.

In other words, both the inherent nature of the problems and the fiscal limitations of State and local governments have influenced irresistibly the assignment to the Federal level of primary responsibility for the policies and finances of the more important new or broadened governmental activities. That there are dangers accompanying such centralization no one would gainsay, but the requirements of action have made such a trend almost inevitable.

Missouri's Movement Toward Centralization

A movement in many respects similar in origin to the tendency toward Federal centralization is the one toward centralization within States. Unmistakable steps in that direction have been taken in Missouri.

Before the enactment of the Centennial Road Law in 1921, the role of the State in highway building and maintenance was limited to furnishing advice and State financial aid, the initiative in road matters remaining with local officials. Since 1921, however, the State has constructed and maintained a system of major and supplementary roads. An increasing mileage of county roads is being incorporated into the State supplementary, or farm-to-market system.

The 1931 Missouri school law is another example. In this instance, the State makes heavy financial contributions without adequate control over expenditures or policies. It is probably safe to say that the establishment of effective State safeguards to insure the efficient use of State monies is only a question of time.

Also in 1931 there was established the State Highway Patrol, which has become an important police agency. A large part of the crime-control functions earlier in the hands of local officers only is now performed more efficiently by State patrolmen.

Since 1933, State laws have extended State control over fiscal affairs of counties. These units are now required to make and file annual budgets with the State auditor. Some progress has also been made, under State guidance, toward uniformity and adequacy of county records, accounts, and financial statements, but a great deal remains to be done.

Recent legislation has given the State authority over, and large financial responsibility for, public-welfare activities formerly treated as purely local functions. Two important examples are the old-age assistance program and the transfer from the counties to the State of two-thirds of the cost for the indigent insane persons in State hospitals.

Considerations Influencing Future Policies

Certain conclusions may be drawn from a consideration of this creeping movement toward State centralization in Missouri. It has been recognized that many formerly local functions are no longer merely local in their significance, but have a State-wide or Nation-wide significance. Furthermore, there is growing acceptance of the need for expert, professional administration that often is beyond the competence of local officials. And, finally, an increasing degree of centralization has been forced by the hard fact that the fiscal resources of local units are not adequate to finance many of the expanding activities formerly allocated to the local government. The sole important source of county revenue is the property tax, and no promising new source of local revenue has appeared.

The need for adjustments in local government is particularly clear in the Ozark region of Missouri. In some of the Ozark counties at present, and prospectively in a larger number, the available fiscal resources are insufficient to support essential local government functions, or the present structure and many of the administrative areas and procedures in local government are poorly adapted for efficient performance of the functions allotted to local units. Finally, the application of full-rate property taxes to lands adapted to forestry, coupled with inefficient and inequitable tax administration, has been one of the factors restraining the development of forestry on private lands. And it is generally agreed that forest restoration, on a much larger scale than that which may reasonably be expected under public programs, is basic to establishing a healthy Ozark economy.

Recognizing this situation, some persons have advocated the transfer of more and more financial and administrative responsibility from the counties to the State. Others have proposed county consolidation, or reorganization and simplification within existing counties, or functional cooperation among existing counties, or various combinations of these and other plans. However, little thought has been directed toward an understanding of the implications and comparative merits of the various proposals as they would apply in Missouri.

Efficiency and Economy

Considerations that should influence an intelligent choice of direction for the evolution of the administration of governmental functions within the State may be considered from viewpoints of efficiency, economy, and popular control of government.

The forms through which local self-government operates, the services to which it applies, and the safeguards against the dangers of centralization—all these may be quite different in our complex modern society from what they were in a simpler era, without destroying democracy.

The first practical questions to be answered are: What functions now in the hands of local officials may fairly be regarded as functions in which the State has predominant interest? What functions are beyond the fiscal and administrative competence of local units to perform adequately? The ideal is the allocation to the State of all functions having a predominantly State-wide incidence. The *order and degree* of transfer of these functions will depend upon relative urgencies, and also upon progress in the "engineering of human consent."

Inasmuch as the need for adjustment is most acute in the poorer Ozark counties, a reasonable first step would appear to be the provision of a single optional alternative plan of local governmental organization designed to fit the conditions of these areas. Such a plan should include, in addition to reallocation of functions, an internal reorganization of the county government and broad supervision of local units by a State Department of Local Government.

The wealthier rural and urban areas, in which local government problems are either not so acute or of a nature somewhat different from those of the poorer Ozark region, would not necessarily be directly affected by any changes in governmental organization in the latter region. Additional optional alternatives, including, for example, city-county consolidation, might be provided to meet the special needs of other areas, or these other areas may merely continue with their existing governmental organizations.

Possible Reallocation of School Functions

Education probably should head our list. Its incidence is more than local, and the State has already assumed primary financial responsibility, but the large number of small local school districts has prevented efficient use of State school funds. Few persons would propose complete centralization of educational control. But little valid objection can be raised against the State's requiring early reorganization of administrative districts, realinement of attendance areas, and the development of satisfactory systems of transportation. A revision of the basis for State aid should be designed to promote this program.

An accompanying reform, to achieve better integrated educational administration and a smaller county budget, is the elimination of the office of county superintendent of schools and the assumption of most of its administrative duties by the State Department of Education.

Other supervisory and administrative functions of the county superintendent could be better handled by superintendents and principals in enlarged rural districts. The office of county superintendent of schools is not prescribed by the State constitution and could be abolished by legislative enactment. The natural reaction of present and would-be county superintendents to oppose such a plan might well be tempered by the realization that both the State Department of Education and the enlarged rural districts would need administrative and supervisory personnel. The more capable could reasonably look forward to becoming a part of a more efficient State staff, with measurably improved tenure.

Roads

A second field in which further authority might well be shifted to the State is that of road planning, construction, and maintenance.

It is universally recognized that the State should be responsible for the major highways, and an increasing mileage of former county roads is being taken into the State system. But even these developments leave most roads to local responsibility. This allocation may be justifiable on the grounds that all roads, except the major and supplementary highways, are primarily of local concern. Such an attempt at justification appears, however, to have been contradicted successfully in North Carolina, where the State has taken over administration of all public roads. Whether this step is the ultimate solution for Missouri is questionable.

Nevertheless, a greater degree of State guidance and control in local road administration is desirable, especially if the current proposal for an increase of the gasoline tax partly for the benefit of county roads is adopted.

As a prerequisite for county participation in any State-aid program, the counties might well be required to eliminate their common-road districts and overseer systems, abolish the special-road districts, and establish a unified road administration directed by a competent, full-time road engineer. Those counties too small or too poor for satisfactory road administration could be required to join with adjacent counties to establish larger administrative areas, employ district engineers, and cooperate in the planning and execution of road programs.

County and district programs should be formulated with the aid of the State Highway Department, and should be subject to the approval of that agency before State-aid funds are released. This methods appears to hold greater promise than any other, short of outright State administration, for achieving an integrated road system adapted to the requirements of school-child transportation and of more efficient land use.

Health and Welfare

The State has assumed increasing responsibility for health and welfare. Professional personnel and more nearly adequate revenues are probable only as a result of State administration of the major programs.

The present hodge-podge of local, State, and Federal administration probably will tend toward an ordered equilibrium in which the local units will become financially and administratively responsible for only the residual outdoor and indoor relief needs.

Institutional care of special classes of indigent persons, old-age assistance, aid to dependent children, and similar programs are already beyond the county level.

If the generally unsatisfactory "county home" is to be maintained, it could probably be better operated in most cases on a district basis under the control of a district board, the members of which would be chosen from a list approved by the State Social Security Commission. Wherever local participation is desirable, local advisory boards may be created.

The Administration of Elections and Taxes

Little attention has been given to possible improvements in election administration in Missouri. Probably the major outlines are reasonably satisfactory, although there is little doubt that some economies and improvements could be made. A very simple (but perhaps not wholly desirable) way of relieving overstrained county finances would be for the State to assume the costs of election administration now borne by the counties. In this event, satisfactory safeguards would have to be set up to assure efficient use of State funds.

The assessment of property for taxation is poorly done in Missouri counties, urban and rural. It is futile to expect that elected local assessors with few or no technical qualifications should be able to make accurate assessments of the varied types of real and personal property in the tax base. Maintenance and use of various aids to assessments, such as tax and soil maps, sales records, and the like, are either beyond the desire or the competence of many local assessors.

As an intermediate step toward State assessment, strong State supervision of local assessors is a logical move. But too much should not be expected from a system in which appointed State employees are given the task of supervising elected local officials. An important State interest in local tax administration (inadequately recognized in practice) exists because of the present method of distributing State aid for education to local districts.

Because desirable land-use adjustments are being retarded by inequitable assessment, the State has further reason to increase its control over tax administration. A tax reversion law should be looked upon as of primary importance in meeting the requirements of a good tax administration device and an almost indispensable land-use adjustment device, particularly in the Ozark region.

Justice

Regarding the administration of justice, various adjustments seem desirable.

Assuming that the circuit court system is to remain substantially as it is at present, something can be said for the abolition of the prosecuting attorney's office and the cooperation of the counties in the judicial circuit in employing a circuit attorney. If the State attorney general's office could be strengthened, there would be much to be said for lodging the county prosecutor's functions in the hands of the attorney general and his assistants.

There appears to be greater need in most counties for a court between the justice of the peace courts and the circuit court, than for the justice court, an outmoded institution. Inasmuch as the probate court in many counties has little business, it might be desirable to reconstitute this court, lodge with it the duties of a trial court, and abolish the justice of the peace and constable systems.

Administrative Reorganization Within the County

What would be left after such a reorganization?

The county court, county clerk, collector, treasurer, circuit clerk, recorder, surveyor, coroner, and sheriff are the elective officers not yet discussed.

An opinion frequently expressed is that the business of the typical Missouri county could be much more economically and efficiently handled by the county clerk and several deputy clerks than by the present complement of elective officials. There appears to be considerable warrant for such an opinion.

An internal reorganization might assume the following lines: Retention of the county court without salary, per diem, or mileage, and perhaps with a different designation; abolition of all other purely county officers; the appointment of a county business manager (by the county court) to be responsible for the preparation of a budget, adequate financial records, and reporting, and for the appointment and supervision of the staff necessary to perform the duties now allocated to the collector, treasurer, recorder, surveyor, and highway engineer, those duties of the sheriff not connected with the circuit court, and miscellaneous tasks connected with minor functions; the circuit clerk to be appointed by, and responsible to, the circuit court, with the clerk or his deputy performing the court duties of the present sheriff.

The crime-control function, including the duties of the present coroner, are assumed to be allocated to the State level. In those cases where inter-county cooperation is desirable, the county court should make the necessary agreements with the aid of the business manager.

Overhead Organization

Two alternative plans for overhead organization may be indicated.

(1) The elected county court to appoint three chief administrative officers: A fiscal officer responsible for budgeting, accounting, and financial reporting, and the collection, custody, and disbursement of funds; a chief clerk responsible for the duties of the present recorder and miscellaneous and new county functions; and a county highway engineer.

(2) The county court to become a county commission of three elected members, each a full-time, salaried man, and each responsible for one of the three sets of duties indicated above. In connection with either the original suggestion or the first alternative, it should be provided by law that neither the county court nor its individual members may deal directly with subordinate employees, but only with the chief administrative officials.

The size of counties could be adjusted either by combination or division in order to harmonize area, population, and resources with the requirements of the new functions. Possibly some forested areas would have no organized local government, necessary local functions being administered by the State.

A State Department of Local Government

To give greater responsibilities to the State without providing adequately within the State government for discharging those responsibilities would probably result in little improvement.

A State Department of Local Government appears to be the appropriate type of agency both for administering the formerly local functions and for aiding and supervising the local governmental units.

Among the logical functions of such a department would be: The prescription of forms for the financial and other records of local units; control over the creation of debt, and supervision of the marketing of bonds; making available the services of a central purchasing agency for local units; control of subdivision and of the creation of special districts; and the continuous or annual auditing of the affairs of every local unit.

The contemplated centralization within the county would make the auditing function of the State department one of great importance.

Possible Results of Reorganization

What would be the effects upon governmental costs and upon popular control of government of an evolutionary reorganization along the lines just indicated?

Experience alone can furnish a satisfactory answer.

An administrative organization geared to present-day requirements within the State may seem inimical to local self-government because of the centralization. On the other hand, it is quite apparent that no real local self-government is possible in connection with the major functions now administered by State-county cooperation; the county inevitably becomes the weaker and the State the dominant partner.

There is much truth in the view that neither an individual nor a governmental unit can long maintain its independence when it cannot pay its own way. The typical Ozark county cannot pay its own way so long as it is burdened with functions that today belong to the State.

Democracy can and does function at the State and national levels, often more effectively than at local levels. Furthermore, it should be recognized that probably the most promising way to prevent an undesirable centralization of power in the Federal Government is for the individual States to establish within their separate borders strong administrative organizations capable of meeting adequately the contemporary demands upon Government.

True Self-Government

Unburdened of State functions, most counties would have the resources and the possibilities for becoming truly self-governing units, in matters of primarily local concern. Local activities, now conducted rarely or not at all, could be established or expanded. Libraries, parks, playgrounds, recreation centers and community auditoriums are needed in the average rural county.

A thorough overhauling of the manner in which records of property ownership are kept would be an eminently worthy undertaking; it would greatly facilitate programs of land-use adjustment in the Ozarks, where title difficulties impede steps to bring land into public forestry programs.

The rejuvenated rural county might well discover one of its most fruitful lines of action in cooperation in land-use planning, and particularly in promoting the execution of such plans. Rural zoning, for example, might prove to be a desirable instrument for the county in promoting socially desirable uses of land.

After rendering unto the State the things that are the State's, local democracies can then proceed toward developing a real and effective self-government with respect to fundmentally important local interests, many of which are now utterly neglected. As a citizen of the State, every local resident entitled to vote may express his will with respect to the conduct of State affairs.

Democracy will have moved in the direction of that increased efficiency that is necessary to its own preservation.

In Later Issues

SHEEP Migrate, Too, is the title of an interesting article that tells what happens when 6,500,000 sheep move to and from Federal range lands in the high lands between the Rockies and the Sierra Nevadas. It is by H. R. Hochmuth and Earl R. Franklin of the Division of Farm Management and Costs, Far Western area.

H. E. Selby, area leader of the Division of Land Economics in the Pacific Region, examines the need and purpose of land reclamation, and concludes that "Probably a valid argument for land reclamation is to provide new land to which farmers on submarginal land can move in order to facilitate retirement of such land from crop production."

The Cotton-Poor South

by B. H. THIBODEAUX

CASUAL readers of newspapers and magazines ordinarily have little love and little time for statistics. But cartoons showing King Cotton in attitudes of acute suffering have been so numerous that it is now generally impressed on the public consciousness that the country has on its hands a "cotton problem," whose general outlines are common knowledge in the cotton country and are not foreign to the general reader elsewhere who peruses the editorial matter accompanying the drawings.

The immediate situation that has attracted wide attention involves decreased income from the total cotton crop, an accumulation of unsold surpluses, reduced exports, and keener competition between American and foreign cotton in foreign markets.

This condition is of national concern because its implications extend beyond the limits of the Cotton Belt.

During the 9 crop years beginning with 1930, the average annual cash income from cotton lint and seed, excluding Government payments, was 674 million dollars less than during the decade beginning with the 1920 crop year. Moreover, during the recent period, prices of items purchased by farmers were not reduced so much, proportionately, as were receipts from cotton lint and seed. This decline in money income and in purchasing power, large even in this era of multimillion figures, is a factor contributing to industrial unemployment and on lowered prices of farm products normally purchased by cotton farmers from other groups.

In the South itself the maladjustment has lowered farm living standards, already adjudged generally inadequate. To cotton farmers, as to other groups, there is a limit in time and amount to the extent to which credit can be stretched to cover periods of low income.

Remedies Must Go Back to the Farm

However serious this immediate circumstance, it is only part of the whole problem. If the cotton surplus were to disappear by magic and cotton prices were to reach parity with a volume of sales per producer such as prevailed before the production-control programs, a great benefit would result. But even if this were achieved, the nature of cotton production now extant in much of the South would continue to yield low returns per producer-family, with levels of living reflecting the low returns. The problem is of long standing.

Permanent remedial measures can be effected only as it is possible to reach back to the farm itself and there to change the condition, present since the development of cotton production in the South, of a small volume of products per worker in the older parts of the Cotton Belt. A general examination of certain phases of the production and income situation in the eight principal Eastern cotton-producing States of North Carolina, South Carolina, Georgia, Alabama, Tennessee, Mississippi, Louisiana, and Arkansas—which we shall call the eastern Cotton Belt—will illustrate the point.

Gross Income per Person Averages $162

In these States, in which approximately 57 percent of the total United States cotton crop originates, the agricultural pattern is largely dominated by the cotton enterprise. There cotton accounted for roughly 52 percent of the cash income from all livestock and all crops, including cotton, during the 14-year period 1924–37, and in 1934 was grown on 69 percent of the farms.

Between 1924 and 1937, the average gross farm income per capita of farm population in the eastern Cotton Belt amounted to $162, less than one-half of the $381 obtained per farm person in the rest of the United States, and only 34 percent of the $483 received by a farm worker in Iowa, Illinois, and Indiana. These figures include receipts from sales, the value of farm products consumed at home, and Government farm-benefit payments. Since the eastern Cotton Belt is largely agricultural, it is easily understood why the ability to support roads, schools, and other social institutions is less than elsewhere in the United States.

The Why of a "Cotton Economy"

This quick look at the agricultural picture in the eastern Cotton Belt suggests a strong relationship between cotton production and low farm incomes. And here lies the difficulty. The South is poor with cotton, but probably would be poorer without it.

An explanation of the predominance of the product in southeastern agriculture lies primarily in the relatively high returns per acre and per hour of labor in cotton, compared to returns from other enterprises generally adapted to the region.

With labor plentiful and available at low wages, so that land can be used intensively, agricultural land values in cotton-producing areas have tended to be based upon actual or potential returns from farming systems that revolve about cotton production, and real-estate taxes have been adjusted to provide public services for the dense cotton-farming population. Once these conditions are established, they tend in turn to perpetuate the cotton system on improved agricultural land, particularly if mortgages are outstanding against it.

But that, of course, does not explain why earnings per worker or per family should be so low in the cotton country. For that explanation it is necessary to look at the production basis itself.

At the prices that have prevailed, low incomes in the eastern Cotton Belt result primarily from the small acreage in crop land and the small volume of crop and livestock products per worker. Between 1924 and 1937, the average acreage in the principal harvested crops per capita of farm population in the eastern Cotton Belt amounted to 5.3 acres, of which 2 acres were in corn and 1.8 in cotton.

Livestock production was even less important, relatively, accounting for only 16 percent of the cash farm income in the eastern Cotton Belt in 1934, and was generally insufficient for home needs.

Population Pressure and Production per Worker

The small volume of production per farm person in the eastern Cotton Belt can be attributed partly to the pressure of farm population on productive land resources. This means farm units too small to utilize the available family labor, even in peak seasons, in the prevalent kind of farming.

Throughout the eastern Cotton Belt, as in other agricultural regions, are part-time and even full-time farms that are too small to constitute family operating units. The total number of such farms is not definitely known. But sheer pressure of population on land, as a limiting factor on size of farm operations, is found principally in the Appalachian, Ozark, Ouachita, and similar areas where factors like physical isolation, a high birth rate, and lack of alternative employment or of employment desires have induced continuous subdivision, generation after generation, of the limited productive areas in valleys and on hillsides.

Where insufficient acreage restricts size of operations in a given type of farming, farm alternatives are limited unless more intensive commercial enterprises can be adopted. Otherwise, the only agricultural recourse is to improve the production of subsistence needs until such time as opportunities for off-the-farm employment or for migration to roomier areas become available.

Type of Farming and Production per Worker

In the broad plains, prairies, plateaus, and river bottoms that constitute the remainder of the eastern Cotton Belt, a different situation prevails. There size of farm operations is limited more by the type of farming followed than by lack of elbow room.

Availability of labor was a factor that influenced the spread of the cotton-type of farming, true, but that type at present does not crowd the available land resources.

Millions of additional acres could be used to produce cotton and other commercial crops if market conditions justified.

In 1934, only 60 percent of the total land area in the eastern Cotton Belt was in farms, and only 42 percent of the farm land was in cropland—of which 15 percent was idle. Considerable variation occurs among individual farms and between areas, of course, but common in the eastern Cotton Belt are farm units of more than 100 acres, with only 25 to 35 acres in cultivation and the remainder mostly left idle except for such fuel, posts, and low-grade grazing as it may provide.

Although much of the eastern Cotton Belt is not highly productive naturally, the land not in cultivation often is as productive as the cropland. This is indicated by the common practice of clearing new land to replace cropland abandoned because of depleted fertility.

Present Significance of an Old Problem

In the extensive Eastern cotton-producing areas in which these conditions prevail, the cotton-corn type of farming has been a small-scale enterprise that has yielded a small volume of products per worker ever since cotton production became important in the United States.

Since that early period, considerable improvement has been accomplished in cotton-production methods, but the adoption of large machinery has lagged, compared to developments in other major farm regions. The acreage of cotton per producer family has been limited chiefly by the quantity of cotton that could be picked by family labor, regardless of how much additional land was available, unless seasonal labor was hired. One man and one mule can produce as much cotton in the eastern Cotton Belt as the farmer's family can pick. For a long time this situation has not changed materially.

Today in the eastern Cotton Belt we find that an ordinary-sized family operates only 10 to 15 acres in cotton (unless additional seasonal labor is hired) plus a few acres in food and feed crops. It has only a few head of livestock to provide for home needs.

If a total production is assumed of 6 to 8 bales of cotton at current prices (and that production is considerably above the average) it is evident that the total cash income available for operating expenses and for living is small. This is true whether the producer is an owner-operator with fixed charges for land payment or whether he is a tenant who pays a share of the crop as rent.

And there, in the small volume of individual production, is a problem that has always existed in the eastern Cotton Belt generally and that became more and more apparent as general economic and social progress indicated the need, and aroused the desire, for levels of living increasingly higher than cotton earnings could finance.

Good roads, automobiles, educational and recreational facilities, improved housing and sanitation, medical and other social services, and other developments ordinarily regarded as components of every-day living nearly all require cash outlays. At the prices that have prevailed, the nineteenth century cotton technology has not been able to provide the necessary funds for these twentieth century needs. True, the occupants of the cabin in the cotton could abandon the land and leave the cabin—and many have—but is there assurance at present of a better place elsewhere?

Tenant Mobility and Exploitive Farming

Certain other important phases of the production situation in the eastern Cotton Belt are associated with the low-income problem. A high tenant mobility attributable, at least in part, to low incomes and a consequent perpetual search for a "better place," together with the general lack of adequate long-term leases, frequently is associated with exploitive farming and a lack of personal interest in maintaining or constructing farm improvements.

Another related difficulty is the lack of soil-conserving measures. This is apparent in the eight major cotton States in the eastern Cotton Belt, in which erosion and gullying have ruined 9,349,000 acres. The lack of soil conservation efforts certainly is not willful, nor can it always be attributed to ignorance, because the lesson of erosion is easily read after every heavy rain. The exploitive farming which permits erosion is both a result and a cause of low incomes on owner-operated and tenant-operated farms.

What To Do About It?

On the basis of present and prospective conditions, types of farming based upon cotton production probably will continue to dominate the agricultural pattern in the region. Important elements in "cotton recovery," then, are the continuation of efforts to adjust cotton supplies and to increase market demand, supplemented by attempts to lower the prices of items bought by farmers. That is part of the way out.

The rest of the way must depend chiefly upon what the farmer himself can or will do and upon the education, guidance, and corrective facilities provided by agencies established to help farmers.

As for improvements in cotton farming as it is now generally practiced, two considerations might furnish points of departure: First, such specialization leaves long periods when labor, work stock, and equipment are idle, and second, the tremendous farm acreage that is not cropped and is mostly unused. But here one must distinguish between adjustments that are immediately feasible and those that can be accomplished only over a period.

Production adjustments now.—In previous times of financial stress, cotton farmers generally have fallen back on food and feed production for home use, in order to reduce expenses and offset lowered incomes.

This is one possibility of immediate adjustment. It would effectively use otherwise idle labor and equipment in supplementing consumption that often is inadequate.

A recent investigation by the Bureau of Agricultural Economics and agricultural colleges in eight Southern States showed that cotton farmers could produce much more food and feed for home use without increasing the competition in the markets.

The mobility of tenants and the unavailability of land and livestock sometimes hinder the growing of adequate food supplies, but perhaps these are not insuperable difficulties. Adequate farm leases, education, and the use of land released from commercial crops by the A. A. A. programs offer opportunities for effectively encouraging the production of food for use at home.

Closely related to this is the use of available labor and materials to improve farm buildings which often are inadequate on cotton farms. Usually both lumber and labor are plentiful on southeastern cotton farms if one thinks of lumber in terms of growing trees and local sawmills.

In the case of tenants, long-term leases and payment at the termination of tenure for unexhausted improvements mutually agreed upon should furnish incentive for better living and better farming. Advantages therefrom would accrue to tenant and landlord. For tenants and owner-operators generally, community-owned construction equipment and the exchange of labor would make possible an effective cooperation in better farm housing at low cash cost.

The production of commercial "side-line" enterprises to utilize labor and equipment during idle seasons often presents an immediate opportunity to supplement cotton incomes, even when the hour returns of labor are less than from cotton. But diversification that necessitates cash outlays for capital and operating expenses or displaces a part of the usual cotton acreage should be adopted only after judicious study of market outlets and prices, physical production possibilities, and the aptitude of the farmer himself.

Longer-time production adjustments.—These measures, largely of a short-term nature, will not in themselves markedly increase average farm incomes in the region—and cash is necessary for many items and services that now are considered necessary. That fact brings us to the proposition that unless commodity prices rise materially above their present levels, a large increase in per capita farm incomes is possible only through an increase in the volume of production per worker. Possibilities for such adjustment are largely of a long-time nature.

One means of increasing the individual worker's production is through the use of larger machinery with our present cropping system. The adoption of one-row cultivating equipment in place of the one-half-row implements commonly used would be a long step forward if the labor saved could be utilized effectively in other ways.

The use of multirow cultivating equipment has increased significantly in recent years in the more level cotton areas in this region, particularly where seasonal labor for picking has been available. But the general use of such equipment will be conditioned upon the perfection and adoption of a mechanical cotton harvester, unless seasonal labor is hired. Moreover, any movement in the direction of increasing the crop acreage per person, with no change in the present area in cropland, would result in serious farm-population displacement unless employment alternatives are available elsewhere.

Similar results would follow a widespread shift from the cotton system to a more extensive use of the present cropland, even if such a change were economically feasible on the basis of production and market possibilities, adjusted land values, taxes, interest payments, and wages.

More Effective Use of Land

Another way to expand the production basis and the worker's income without displacement of the farm population is to supplement the present use of cropland on cotton farms with a more effective use of the land not in crops. By and large, an effective utilization of this noncropland in conjunction with the large reserve of seasonally idle labor on cotton farms is one of the little-explored potentialities in Southern agriculture.

Farm woodlands represent a possible source of income, particularly with the development of pulp and paper mills in areas of rapid tree growth. Improved forestry practices and wood markets might lead to profitable employment for seasonal labor that would otherwise be idle. In general, however, adequate farm-forest management will be conditioned upon the correction of the taxation policy and the economic pressure that frequently force forest depletion and prevent reforestation.

A severance sales tax on forest products rather than an annual tax per acre in woodland is one solution to the first difficulty.

Long-term credit extended at low interest rates, with the growing trees themselves as collateral, not only is a possible solution to the second difficulty, but it also presents opportunity, through credit control, effectively to induce the adoption of improved forest practices on farms. Until these institutional obstacles are removed, farm forestry may continue to be a neglected phase of the farm business regardless of how well the farmer is taught the improved forestry practices.

To Strengthen Production, Income, Buying Power

The more effective utilization of noncropland for pastures as a basis for extensive livestock enterprises is an open question where upland native pastures are not naturally highly productive and are difficult to keep free of encroaching forest growth. Furthermore, corn yields of 10 to 15 bushels to supplement low-carrying capacity pastures do not make for strong commercial competition for cropland which, with the addition of a little fertilizer, may produce 200 pounds or more of lint cotton per acre. But both feed-yield improvement and pasture improvement represent real possibilities as bases for livestock enterprises that would increase farm incomes by bringing into effective use so-called pastures that are little more than idle land, and by utilizing labor and equipment that are idle a large part of the year.

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This discussion has dealt broadly with some of the fundamental considerations underlying the situation on cotton farms in the eastern Cotton Belt generally. It is recognized, of course, that numerous exceptions exist in terms both of problems and of possible remedial measures.

Application of specific correctives even to the general problems discussed must be adapted to varying needs in different areas, and even on individual farms. Thus, the betterment of conditions inside the cabin in the cotton must depend upon an understanding of local agriculture as well as of the broader economic and social setting of which that agriculture is a part.

But through the maze of local situations and needs, this central theme lends coordinating objectivity to the adaptation of corrective measures: The cabin in the cotton will continue to be dilapidated, its occupants will continue to be inadequately provided for in terms of modern living standards, and market purchases of industrial and other products will continue low until means are found to strengthen the economic basis of production, income, and purchasing power of the occupants of the cabin who depend upon farming for a living.

Recreation for Farm People

by C. R. DRAPER, E. J. NIEDERFRANK, W. C. McKAIN, JR.

PRIVATE and public interests have gathered a wealth of practical information about the recreational tastes of city dwellers. Much less is known about the rural resident's preferences; yet doubtless his needs, though less acute, are no less real.

The assumption that diversions that satisfy the wants of urbanites will be equally acceptable to rural and farm people is questionable. Country scenery and relaxation in uncrowded surroundings that offer change and enjoyment to city residents can hardly be so satisfying to those whose everyday work is in just such an environment. The urbanite's daily impersonal contacts with large numbers of people puts a premium on dispersive forms of recreation which may not appeal at all to rural dwellers, whose contacts are made in small groups.

Another Use for Land

These considerations may well claim the attention of land use planners, because recreation as an alternative use for land occupies a place of steadily growing importance. The tasks of those charged with administration of public park areas grow more complex as parks multiply and use increases. Whatever sheds light on the questions of whether, and where, and how, to develop recreation sites would seem to be of use both to park administrators and to those interested in rural welfare.

Consequently the effort is being made through studies of existing situations to analyze the needs and available facilities for recreation, so that people and playgrounds may be brought together with a maximum of satisfaction and efficiency. Reported here is a small segment of such a study in Maine, conducted cooperatively by the Division of Farm Population and Rural Welfare of the Bureau of Agricultural Economics and the College of Agriculture of the University of Maine, with the assistance of its Coe Research Fund.

Parks in a State of Parks

Until recently, it was tacitly assumed that the inhabitants of Maine were too well provided for by nature to make necessary the creation of public parks. Nevertheless, a sizable proportion of them—principally those with little money—have recreational needs that nature unaided apparently cannot, and certainly does not, supply. That there are such persons is proved by the fact that thousands thronged to newly developed park areas whose exploitation required no more equipment than a means of transportation and perhaps a picnic basket and bathing suit.

As in other States, the Federal Government carried on in Maine a submarginal-land purchase program that in this case involved the allocation of some land for recreational sites. Seven park areas were developed to varying degrees, and in 1939 were leased to the 4-year-old State Park Commission for administration.

One subsequently was turned over to the United States Biological Survey and another to the forestry department of the University of Maine. The acquisition cost the Federal Government what local citizens considered a high price in dollars per acre. Approximately $400,000 more was spent in developing the sites. So, land-use planners would seem justified in inquiring what sort of recreational returns citizens of the surrounding areas received.

In six of these parks, scattered through southern and western Maine, information was obtained by means of simple card schedules presented by enumerators to motorists as they entered the parks. The counting was done from mid-July to early October 1939, for an average of 30 days in each park, and covered 50 to 75 percent of all cars entering five of the parks, and about 20 percent of those at Sebago Lake.

The six parks, all but one of them in townships with populations of less than 1,000, are rural in setting. To reach them, urban people had to travel up to three and one-half times as far as visitors from rural places. But, nevertheless, a relatively low proportion of farm persons were represented in the sample of park visitors.

Of the areas around the parks from which a total of 92 percent of the Maine visitors was drawn, the total population was estimated in 1935 at 499,336, about 61 percent of the State's population. Twenty percent of this number was reported in 1935 as farm population; but of those visitors to the park areas who were counted in the study, only 7.6 percent were farm dwellers.

This table shows the number and percentage of automobiles from farms in Maine:

Park	All Maine cars	Cars from farms	
		Number	Percent
Old Town	427	18	4.2
St. George Lake	317	49	15.5
Webb Beach	579	34	5.9
Center Hill	155	13	8.4
Sebago Lake	499	17	2.9
Pownall	147	30	20.4
Total	2,124	161	7.6

Because there was an average of 44 persons for each 10 cars, the sample represents something over 9,300 visitors of whom about 700 were farm residents.

The Importance of Distance

The difference in the case of total rural-urban distribution is also marked. On the basis of 1935 estimates, 45 percent of the area's inhabitants were rural, whereas only 30 percent of the park visitors from the same area were from rural places. It was found also that the percentages of visitors from rural and urban places varied considerably between parks. The relatively high proportion of urban visitors to Old Town and Sebago Lake may be explained by their proximity and accessibility to cities.

Farm residents in the zones served by the parks are not taking advantage of the facilities offered. The reason cannot be that the parks were too close at hand to exert attraction for nearby rural people, or a greater proportion of them would have attended the other more distant parks. Actually, however, results of the study show that only one of the parks (Sebago) encroached to any extent on areas served by the others. Moreover, farmers who did make use of the parks tended to travel shorter distances than other visitors.

Professional persons travelled an average of 33 miles to a park; skilled workers, 30 miles; semiskilled, 26; unskilled, 24; and farmers, 18. The average distance travelled to all parks was 27, with a variation of 9 to 41 miles.

Which Parks Do Farmers Like?

One explanation why relatively few farm people visited the parks may be found by analyzing the occupation groups and income levels of families represented in the sample. The standardized resale values of all automobiles driven by those in the sample were obtained to give some idea of income levels represented. According to this measure the farmers had the lowest income level of all occupation groupings. Moreover, there was a positive association between income levels, and the distances visitors were willing to travel for recreation. This would suggest that a park-development program designed for farm and rural village people in Maine must be located within a short distance of the population to be served.

Another reason for the smaller proportion of farm people visiting the sites may be that the facilities and activities offered did not appeal to farm folk. Not much is known concerning the type of park that will attract the rural-farm population, and the survey under discussion can add little to this information, since it dealt with a selected sample, namely, those who were attracted by existing facilities. It is possible that more farm people would patronize a different type of recreational development.

The study did show that there was a higher proportion of young people among farm visitors than among nonfarm visitors. Perhaps adults in the farm population are not interested in this type of recreation to the extent that adults in the general population are, or else the existing recreation facilities appealed more to farm children than to their parents.

Facilities for the Whole Family

At any rate, a tentative conclusion may be that in order to attract farm and village people, future recreation areas should have facilities which would appeal to younger folk, or perhaps facilities appreciated by all members of family groups, particularly since population estimates agree in showing that ratios of children to adults will, for several generations at least, remain higher among rural groups than in the urban population.

Recreation in Maine has already prompted some discussion by county land-use committees, but in each case interest has centered around ways and means of persuading out-of-State visitors to turn a greater proportion of their yearly tribute to this or that locality. Practical-minded committeemen were well aware that the yearly revenue from Maine tourists has topped the hundred-million-dollar mark. But it would seem that an equally practical consideration is that of developing recreation facilities for local people.

Future submarginal-land-purchase programs of both the Federal and State Governments will operate in rural areas some distance removed from urban centers, for submarginal land is seldom found in the vicinity of cities. One of the alternative uses for the land so purchased will be recreation. The farm population will be able to make most use of these areas because of their favorable location and farmers should be encouraged to suggest the improvements and facilities that will best meet their needs and desires.

Planning for Parks

The land-use-planning program, particularly on the community level, may be overlooking an opportunity to guide the development of recreation areas for rural people. At the present time, committee members in many States are being asked to classify land unsuited for agriculture according to its best alternative use. In cases where that alternative use is recreation, committees should go further and specify the kinds of development and facilities which would best serve the interests of local people. If this were done, it is likely that a greater proportion of farm families would make use of parks located in their vicinity.

Conservation to Improve Tenure

by M. E. HAYS and D. D. HAMMERLY

TENANT farmers on small acreages can participate in soil improvement.

A group of such farmers in Iowa, through cooperative action, have found soil building not only possible and advantageous, but also a strong argument with their landlords to give them more secure tenure on their farms.

A manure spreader cooperative—it may seem a small item—has been organized, and 20 spreaders obtained, by 43 farmers in Washington County, Iowa. The farmers, all borrowers from the Farm Security Administration, are tenants on comparatively small farms and are trying to follow the best farm-management practices, to rehabilitate both themselves and the land on which they live.

They are interested in rebuilding soil—not their soil, but their landlords' soil. They expect in return to improve their tenure relationships. They realize that a shortage of farms exists in Iowa, and that thousands of farmers are being displaced every year.

5,000 Farmers Without Farms

A recent check in Iowa counties showed that 442 out of 9,800 Farm Security Administration standard borrowers lost their farms and were unable to find new locations for the 1940 crop year. Another 1,095 persons, applicants eligible for FSA loans, were unable to find farms, while the FSA's county supervisors estimated that another 3,388 farmers could not get locations. In all, it was conservatively estimated that 5,000 farmers in Iowa could not find a place to farm during 1940.

The Washington County borrowers want to stay where they are and believe by using the best soil-building practices they will have a much better opportunity for security of tenure.

Manure can be spread without the use of a spreader, but the Iowans realized that more acreage can be covered and more efficient use made with mechanical equipment than with a wagon and a pitchfork. The manure-spreader cooperative grew from small group meetings between borrowers and Rural Rehabilitation Supervisor Cecil F. Rooks.

When the problem of buying spreaders was presented to them, they recognized the need and responded immediately, but they also realized that the capital investment was not justified on each individual farm. There were consequently other problems involved, which they took immediate steps to solve.

Problems of Cooperation

Could they work together? Who would use the spreader first?

Would the other fellow take care of it? Who would pay for the repairs? All these problems were worked out by the farmers themselves by discussing them frankly at their small group meetings.

When a number of the small cooperatives developed, FSA District Supervisor Paul F. McLean and State Cooperative Specialist D. D. Hammerly were called in to conduct a series of meetings among the borrowers. It was agreed in these meetings that 20 small cooperatives should be organized, to buy the spreaders, all joining in a larger cooperative to make the most advantageous purchase.

At a meeting of the larger group a committee was selected to act for all members in the purchase of the equipment. They canvassed dealers and gave each an opportunity to bid. Ten dealers and factory representatives appeared before the group to discuss the merits of their particular spreader with the committee. When all bids were in, the committee entered into an agreement with one dealer for all the machines. The cooperative purchase of 20 machines resulted in a saving of 24 percent from the list price.

The Landowners Are Pleased

Arrangements were then made to have the spreaders shipped to the dealer's place of business, knocked down. Upon their arrival, all members of the cooperative went to the dealer's warehouse, where they first watched trained mechanics assemble a few of the spreaders, and then, under the mechanics' guidance, assembled and greased the remainder for themselves. Every member of the group thus learned about the construction, operation, repairs, and maintenance of the new equipment.

Besides, the men learned the principles of the Farm Security Administraction's Community and Cooperative Service program, and were ready to make use of it in later problems.

The activities of the cooperatives went further. Meetings were held with the landowners whose farms would be benefited. Many landowners expressed satisfaction and gave assurances that they would be agreeable to more secure tenure arrangements for such progressive tenants.

This group approach to the soil-building problem of small farmers aroused great local interest. It demonstrated that farm operators themselves can solve many problems through cooperation; that they can participate in soil-building programs, and that substantial savings were available through group purchases. It provided an educational opportunity for the participants, both in the operation of their new spreaders and in the possibilities of cooperative action, through the Farm Security Administration's Community and Cooperative program, in matters like getting equipment for liming and marl mining, terracing, drainage, land clearance, prevention of wind erosion, and conservation and develoment of water facilities.

The Migrants

This article is the last of a series concerning migration to the Far Western States during the past decade.

VI. Migration to California

by SEYMOUR J. JANOW and DAVIS McENTIRE

MIGRATION to California during the past decade, about which so much discussion and controversy have centered, represents the latest stage in a long history of population movement to this State.

For a century, California has been widely regarded as a place of unusual opportunities, and its population, commerce, and industry have been continuously increased by the migration of people and capital from other States and foreign countries.

From 380,000 persons in 1860, the population in California increased to 5,677,000 in 1930—a growth of 1,500 percent in 70 years and nearly four times as rapidly as that of the national population during the same period.

Only a small part of this increase has been due to natural growth. It is estimated from census data that approximately nine-tenths of the increase in the population of California in the 8 decades was due to migration. The largest migration to California, both in number and relative to the population already in the State, took place between 1920 and 1930, when more than 2 million persons entered the State. The number of people moving to California in the 1920's constituted a larger addition than has been made to the population of any State by internal migration within any 10-year period in American history.[1] Even in 1930, 2 out of every 3 persons in California had been born outside the State.

Once a Welcome, Now Unfriendliness

While commerce and industry were expanding, fertile lands remained unoccupied, and additional agricultural laborers were needed, this immigration was regarded as an adjunct to the general prosperity and doubtless intensified the expansion of economic activities. Then, there was a fair chance that every migrant would find employment and even a welcome in the economic and social life of his new community.

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[1] *By 1930 all the States west of the Mississippi River, except California, Oregon, Nevada, and Arizona, were losing more people than they were gaining through migration. National Resources Committee, "The Problems of a Changing Population." 1938. Page 91.*

The movement of population to California has continued since 1930, but during that decade in a setting of industrial and agricultural depression and widespread unemployment; newcomers have been conspicuous proportions of the State's depression problems of relief, unemployment, health, housing, and others. The word "migrant" in California has come to be synonymous with "indigent" and habitual "migratory workers."

In contrast with previous decades, popular attitudes toward newcomers have been actively hostile in many quarters and unfriendly almost anywhere. An example was the "bum blockade" maintained by the Los Angeles city police during the fall of 1935 at the southeastern border of California. The police turned back or arrested migrants without means of support and presumably bound for Los Angeles.

Another example was the organization in 1938 of the California Citizen's Association, which called upon the people of the State to "use every effort to discourage this migration both at its sources and its destination, or be overwhelmed by economic chaos and financial ruin."

Migrants were described thus by the Association: "Great numbers of them do not read. What limited information they get on public affairs is by means of radio, and word of mouth. Generally speaking they have had neither the income, the education, the skill nor the desire to attain to California's normal standard of living."

The Time of the Migration

Part of this general attitude is the prevailing impression that the migration to California during the past decade has been of a magnitude unprecedented in the history of the State.

The number of migrants to California during the 1930's has not yet been approximated from the 1940 census, but data from a survey by the Bureau of Agricultural Economics provide a basis for a rough estimate. This survey, in cooperation with the California Department of Education, enumerated more than 187,000 school children, representing more than 116,000 families who had arrived since 1929. It is estimated that 84 percent of all the families with school children eligible for inclusion were counted. Hence, it is probable that there were in California in the spring of 1939 approximately 139,000 families that had entered the State after 1929 and that these families had 239,000 children in public schools at the time of the survey. The study did not enumerate unattached persons or families without school children.

Assuming that the proportion of school children in the total population migrating to California is about the same as in the general population of the areas from which these migrants came, one can estimate that approximately 1,100,000 persons moved to California after 1929 and were still in the State in the spring of 1939.[2]

This number is not an estimate of net population increase in California during this period, as departures from the State and the balance of births and deaths in the State have not been taken into account.

The net addition to the population by migration from 1930–39 is undoubtedly somewhat smaller than the estimated number of persons moving into the State; however, even if it is assumed that during the entire decade 1,250,000 persons have been added to the population as a result of migration, this number is 750,000 less than the number migrating to California between 1920–30. Migration during the 1920's made a net addition of more than 60 percent to the population of California in 1920; with the maximum assumptions the 1930–40 migration has not added more than 22 percent to the State's 1930 population.

Sources of the Migration

Migrants to California during the 1930's were drawn from virtually all occupations, from servants and unskilled laborers to the most highly trained professional persons. Questionnaires were returned by children from families of nationally known motion-picture stars as well as from migratory agricultural workers.

Agricultural people were an important element in the migrating population, but, contrary to popular impression, they were by no means predominant. Less than one-fourth of all families enumerated in the migration survey had been engaged in agriculture either as farmers or farm laborers before migration.[3]

Most farm workers migrating to California in the 1930's came from the Southern Plains States. Approximately one-fourth of all enumerated

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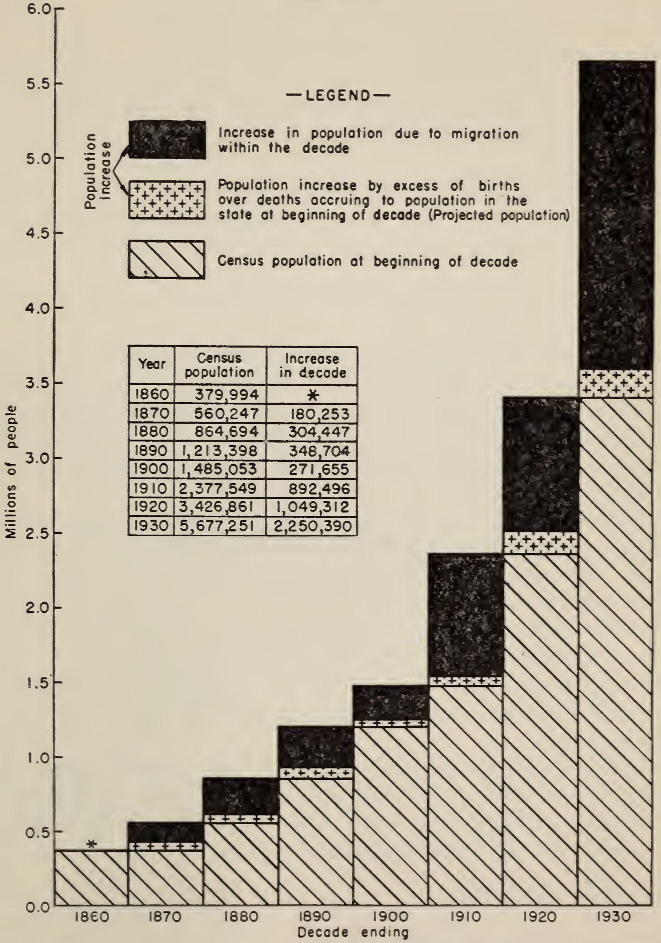
[2] *To each child enrolled in public schools in the States which contributed most heavily to the California migration, there were approximately 4.6 persons in the population. Therefore, the total number migrating would be the estimated eligible pupils in California schools, 239,000×4.6 or 1,100,000 persons.*

[3] *Occupations of migrant family heads, both before migration and at the time of the survey, were determined from pupils' replies to questions regarding parents' occupations and industries. Occupations were classified according to the U. S. Census—"Alphabetical Index of Occupations, 1930." Occupational group classifications were based on Alba M. Edwards' "A Social-Economic Grouping of the Gainful Workers of the United States, 1930." In this connection, the average age of pupils returning questionnaires was 13 years and the standard deviation from this average was 2 years. In most cases more than one questionnaire was received per family and data were coded for a given family head after considering all replies.*

FIGURE 1. — CALIFORNIA'S POPULATION GROWTH BY DECADES AS CAUSED BY NATURAL INCREASE AND MIGRATION 1860-1930



Year	Census population	Increase in decade
1860	379,994	*
1870	560,247	180,253
1880	864,694	304,447
1890	1,213,398	348,704
1900	1,485,053	271,655
1910	2,377,549	892,496
1920	3,426,861	1,049,312
1930	5,677,251	2,250,390

*Census data incomplete for 1850

families who were engaged in agriculture before migration lived in Oklahoma in 1930. Oklahoma, Texas, Arkansas, and Missouri were the States of residence, in 1930, of more than half of the agricultural families enumerated. Most of the other agricultural families came from Kansas, Nebraska, Colorado, Iowa, and South Dakota, in the order named.

In contrast with the concentration of agricultural families in Oklahoma, Texas, Arkansas, and Missouri, less than 20 percent of all nonagricultural families reported these States as their residence in 1930. Eleven percent of the nonagricultural families were in the New England and Middle Atlantic States, 15 percent were in the East North Central States, 20 percent in the West North Central States and 24 percent in the Mountain and Pacific States in 1930.

Striking concentrations are observed in the cities of Texas, Oklahoma, Arkansas, and Missouri, and around Chicago, Detroit, Cleveland, St. Louis, Omaha, Wichita, Denver, Salt Lake City, Spokane, Seattle, and Portland.

Four percent of the families were in California in 1930 but left the State and returned later.

In general, the attracting power of California continued in the decade of the 1930's and drew agricultural population mainly from the States of the Southwest and the Great Plains; and other occupational groups from the urban centers of the country, in important proportions, from as far east as the Atlantic Seaboard. Only 3 percent of the families came from foreign countries.

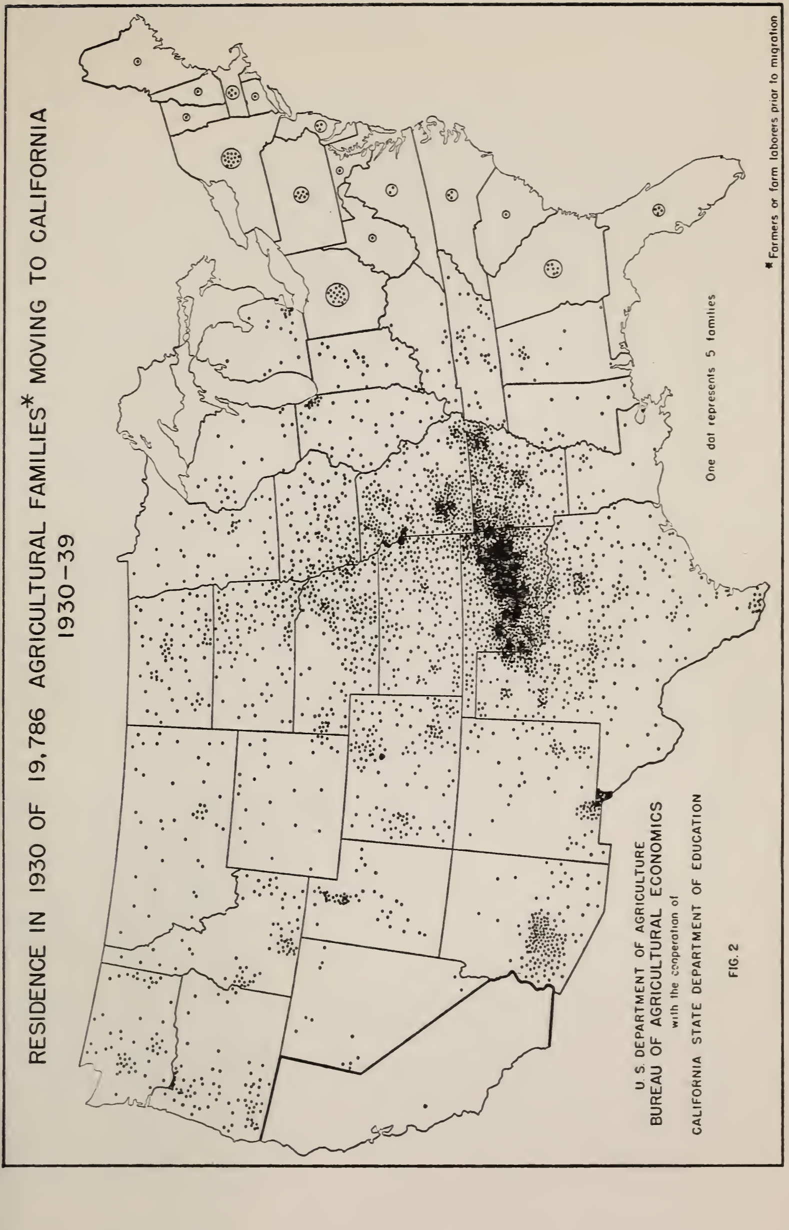
The migration to California during the past decade reached a peak in 1936 and 1937; half of the enumerated families came in the 3-year period, 1936–38. Arrivals of agricultural families were more highly concentrated in 1936 and 1937 than was true of the nonagricultural migrants but the differences as between occupational groups were not substantial.

Marked differences in timing, however, were apparent as between various regions of origin. Nearly half of the migrants from the Southwest came to California during 1936 and 1937, following severe droughts in 1934 and 1936.

Arrivals from the Great Lake States and the Atlantic Seaboard were more evenly distributed over the 9-year period, with approximately 30 percent arriving in 1936 and 1937. The inflow from Oregon and Washington was practically constant during the entire period.

Areas of Settlement

Contrary to common belief, migration to California during the 1930's was not a haphazard drifting of a chronically migratory group, trying to find by a process of trial and error a habitable place to settle. The evidence is clear that, for the majority of families, migration was a direct



RESIDENCE IN 1930 OF 19,786 AGRICULTURAL FAMILIES* MOVING TO CALIFORNIA 1930–39

One dot represents 5 families
U. S. DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ECONOMICS
with the cooperation of
CALIFORNIA STATE DEPARTMENT OF EDUCATION

FIG. 2

* Farmers or farm laborers prior to migration

and purposeful move to places in California selected on the basis of former occupational experience as relatively promising in opportunities for employment.

Approximately 60 percent of the families enumerated moved directly to the counties in which they were living in 1939.

Even among those families who reported themselves as agricultural laborers in California in 1939, more than half said they had lived continuously in the same county since their arrival in the State; three-fourths of these families reported they had lived continuously in the counties where they were enumerated from within a year of the time they entered the State.

In general, the former occupational experience of the migrant families seems to have largely guided their selection of places to settle in California. More than half of the families settling in California's richest agricultural valley had been engaged in agriculture before migration. Few of the clerical class, or of the professional workers, settled there. The families whose former occupations were largely in professional, managerial, clerical, skilled labor, and other labor groups migrated to counties with large urban centers, where California commerce and industry are concentrated. Only 11 percent of the enumerated families in the metropolitan counties had been engaged in agriculture before they moved. But nearly three-fourths of those who had been farmers and four-fifths of the former farm laborers settled in communities of less than 10,000 population.

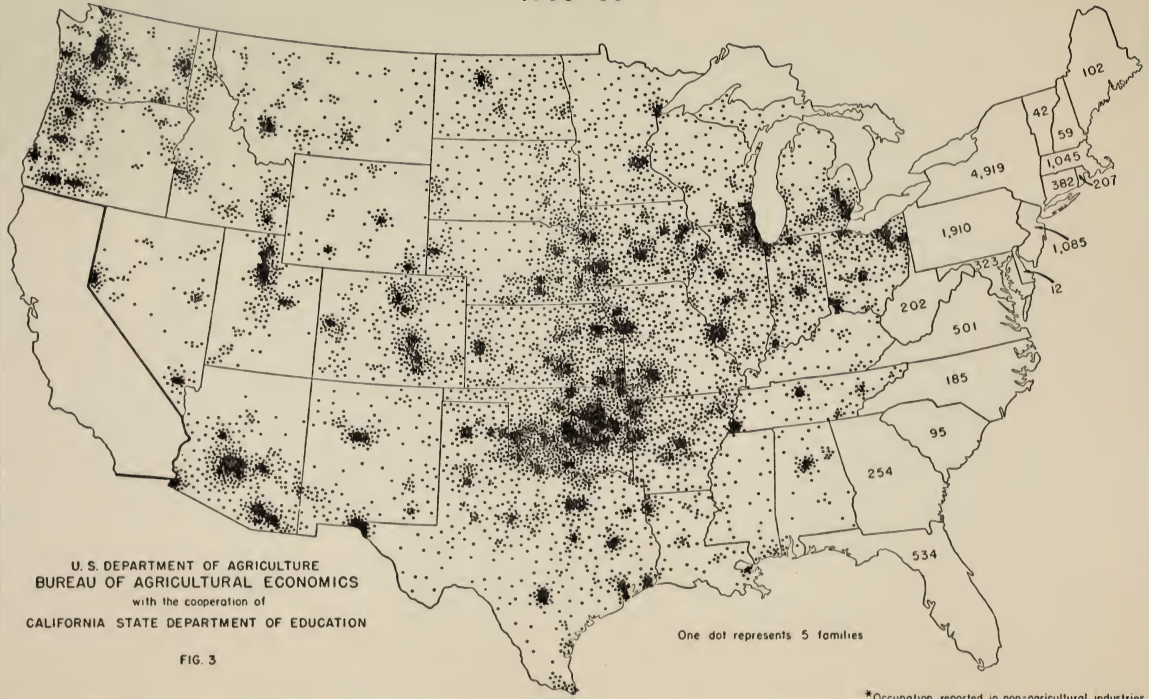
Of all families included in the survey (116,000), more than three-fourths settled in urban areas—cities of 2,500 population and larger. Nearly 40 percent settled in cities of over 100,000 population, 23 percent in the city of Los Angeles alone.

Uneven Distribution

While the impact of the migration, as measured by the ratio of newcomers to the resident population of the State, was not so great during the 1930's as in most other decades, local difficulties attendant upon the movement have in part resulted from the uneven distribution of the newcomers. Some counties have received few migrants in relation to their 1930 population, but others have experienced disproportionately large increases due to migration (table 1).

Four metropolitan counties that had 64 percent of the State's population in 1930 received only 61 percent of the enumerated families. Los Angeles County, however, did receive in addition to its 1930 population a higher proportion of the enumerated families. San Joaquin Valley counties, with 10 percent of the State's population in 1930, received 15 percent of the survey families. In the State as a whole, the school survey enumerated 21 migrant families to each 1,000 population accord-

RESIDENCE IN 1930 OF 69,896 NON-AGRICULTURAL FAMILIES* MOVING TO CALIFORNIA
1930-39



U. S. DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ECONOMICS
with the cooperation of
CALIFORNIA STATE DEPARTMENT OF EDUCATION

FIG. 3

One dot represents 5 families

*Occupation reported in non-agricultural industries ing to 1930 figures. However, in Kern County in the southern San Joaquin Valley, there were 51 survey families per 1,000 of 1930 population. Several other valley counties received a similarly disproportionate share of the newcomers.

The California Taxpayer's Association reported a 70-percent increase in the population of Kern County since 1930.

More than half of the migrants to the San Joaquin Valley had been engaged in agriculture before migrating to California. In large part these are the families that are meant when the terms "migrant" or "drought refugees" are used. Unable to afford productive farm land, or even lots, within the older communities, newcomers to whom a lot and a shack are symbols of a new start, have settled in thousands on the fringes of cities and towns in the California valleys. The result has been the development of new slums surrounding the valley communities. These new shacktowns often are known to the older communities as "Little Oklahomas."

Occupations and Occupational Adjustments

As indicated previously, migrants to California have been drawn from many occupations and generally are a cross section of the occupational structure of the States from which they came. This is shown in figure 4 by comparing the occupational group distribution of the survey family heads from seven regions with the distribution of all gainfully employed males in the population of these regions.

Because of the large number of families from Oklahoma, this State has been shown separately. The proportion of farmers and farm laborers among the families migrating from Oklahoma is somewhat greater than the proportion in the working population of Oklahoma in 1930. Proprietors, managers, and professional persons were somewhat underrepresented among the Oklahomans. In all regions, except Oklahoma, migration to California drew more heavily on nonagricultural groups than on the farmers and farm laborers. There was a marked tendency for both farmers and farm laborers to remain in the areas losing population to California.

Among the nonagricultural classes, professional persons, proprietors, managers, clerical workers, and semiskilled workers were substantially overrepresented in the survey group. Unskilled laborers and domestic servants were underrepresented.

The distribution of occupations pursued by migrant family heads in California in 1939 was strikingly similar to the occupational structure of the California population in 1930. This is not surprising as it probably can be assumed that employment opportunities in California are likely to be roughly proportional to the numbers already employed in the various occupations.

TABLE 1.—*Families enumerated in California migration survey in 1939 as distributed by counties of residence in California and compared with distribution of California's population in 1930*

California (county of residence)	Enumerated families		Population in 1930		Number of enumerated families per 1,000 population
	Number	Percent	Number	Percent	
State total	116,333	100.0	5,677,321	100.0	21
San Joaquin Valley counties	16,831	14.5	543,269	9.6	31
Fresno	3,099	2.7	144,379	2.5	22
Kern	4,185	3.6	82,570	1.5	51
Kings	690	.6	25,385	.4	27
Madera	744	.6	17,164	.3	43
Merced	926	.8	36,748	.7	25
San Joaquin	2,062	1.8	102,940	1.8	20
Stanislaus	1,580	1.4	56,641	1.0	28
Tulare	3,545	3.0	77,442	1.4	46
Sacramento Valley [1]	5,566	4.8	301,578	5.3	19
Southern California [2]	11,720	10.1	514,644	9.1	23
Coast counties [3]	6,997	6.0	488,588	8.6	14
Mountain counties [4]	4,652	4.0	223,206	3.9	21
Metropolitan counties	70,567	60.6	3,606,036	63.5	20
Alameda	5,504	4.7	474,883	8.3	12
Contra Costa	1,374	1.2	78,608	1.4	18
Los Angeles	52,715	45.3	2,208,492	38.9	24
San Diego	6,272	5.4	209,659	3.7	30
San Francisco	4,702	4.0	634,394	11.2	7

[1] *Sacramento Valley counties: Butte, Colusa, Glenn, Sacramento, Solano, Sutter, Tehama, Yolo, Yuba.*

[2] *Southern California counties: Imperial, Orange, Riverside, San Bernardino, Santa Barbara, Ventura.*

[3] *Coast counties: Lake, Marin, Monterey, Napa, San Benito, San Luis Obispo, San Mateo, Santa Clara, Santa Cruz, Sonoma.*

[4] *Mountain counties: Alpine, Amador, Calaveras, Del Norte, Eldorado, Humboldt, Inyo, Lassen, Mariposa, Mendocino, Modoc, Mono, Nevada, Placer, Plumas, Shasta, Sierra, Siskiyou, Trinity, Tuolumne*

Relatively, more of the enumerated families were farm laborers, semiskilled laborers, and skilled workers, than among the resident population in 1930, but the differences are not outstanding.

A Net Shift Out of Agriculture

The process of adjustment by the newcomers to employment opportunities in California required much shifting from one occupation to another. The number of farmers among the group as a whole had decreased by three-fourths from the number who were farmers before coming to California; farm laborers had increased from 8 percent to 12 percent of all families, but the net effect when both agricultural groups are considered together has been a net shift out of agriculture following migration to California.

Very few of the agricultural migrants to California had succeeded in establishing themselves as farmers; the great majority of those engaged in agriculture were working as hired laborers.

The shifting of occupations was considerable among all occupational groups but greatest among the former farmers, only 14 percent of whom became farmers in California. Most of this group became farm laborers and skilled and semiskilled workers.

The professional classes showed the greatest occupational stability, but even among them only three-fourths of those who had been in the professional classes before coming to California were still in this group in California in 1939 Nearly two-thirds of the former skilled workers were still members of this class subsequent to their migration. In general, the greatest occupational changes took place among agricultural and unskilled labor groups.

Of the family heads who before migration were unemployed, on W. P. A., or receiving relief, 36 percent were reported to be in these groups in California. Twenty-one percent of the former farm laborers, 19 percent of the unskilled laborers, and 16 percent of the former farmers were reported as unemployed, on W. P. A., or on relief in California. Only 7 percent of the former clerical workers and 3 percent of the former professional persons, however, were reported as unemployed, on W. P. A., or receiving relief in California. By this index, the agricultural and unskilled labor groups were the least successful in establishing themselves in California.

Significance of the Migration

Within California the prevailing attitude toward present migration is one of fear and dismay, if not active hostility.

With the declared purpose of discouraging the entry of needy migrants, the California legislature in 1940 increased residence requirements for legal settlement (a prerequisite for relief) from 1 to 3 years. A report of the California State Chamber of Commerce, The Migrants, published in May 1940, reflected the general feeling that the migration is dangerous to the welfare of the State and should be restrained.

Figure 4 Percentage distribution of male heads of enumerated families by former occupational groups by regions of 1930 residence; and comparison with distribution of all gainfully occupied males in those regions according to the 1930 census.

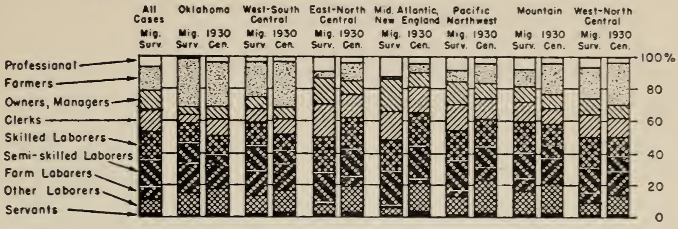


Figure 4a Male heads of enumerated families by 1939 occupational groups and former occupational groups as per cent of total.

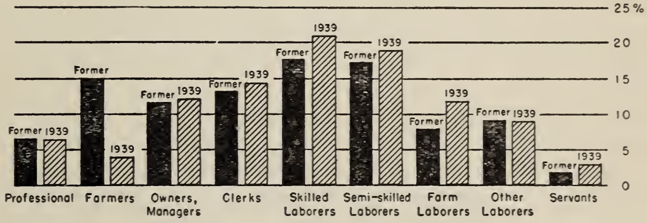
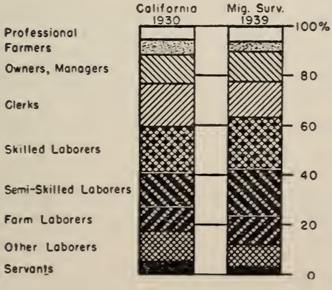


Figure 4b Percentage distribution of employed male heads of enumerated families by 1939 occupational groups in California compared with distribution of all gainfully occupied males in California according to the 1930 census



The report said: "The best available evidence indicates that this State not only cannot hope in the near future to adjust its economy to adequately employ those already her, but that should the inflow of depression migrants from the Great Plains and Southwestern Cotton States continue at anything like the scale of the past 5 years, it will seriously disrupt the economy of California, jeopardizing wage scales, living standards, and social-welfare programs."

If There Were No Migration

Expressions of dismay as to the great public costs of relief, education, and health services attendant upon this migration invariably are focused on the distressed group of migrants and omit reference to considerations as to what the level of the same public costs would have been in the absence of migration.

California has the lowest birth rate in the nation; without any migration into or out of the State and the same birth and death rates, California's population would have ceased to grow after 1940 and by 1950 would be less than it had been in 1935.[4] Without migration the number in the young age groups would shrink and there would be a substantial increase in both the number and proportion of old persons in the population.

Economic depression, unemployment, and social maladjustments in California during the 1930's are probably reflections of a general depression, rather than the result of an unprecedented migration. Circumstances suggest that the distressed migrant of today has but followed an honorable tradition of moving in search of opportunity, and there is evidence that the newcomers are being assimilated into California's economy. With a substantial resumption of general business activity, it is likely that present trends toward economic assimilation of the migrants would be strengthened. It would be a rash prophet who would predict early cessation of the expansive character of California's economy.

(*The authors acknowledge the cooperation of the California Department of Education and the assistance of Walter E. Morgan, Assistant Superintendent of Education, and Lillian B. Hill, Chief of the Bureau of Attendance and Migratory Education. The authrs are indebted to Elizabeth Fine, who supervised the statistical work, and to Howard Finn, WPA Project Supervisor. Assistance in the preparation of these data was provided by personnel of Work Projects Administration official project 65–2–08–101.*)

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[4] *Thompson, Warren S., Welpton, P. K. California Population Estimates to 1960. Los Angeles Bureau of Municipal Research, 1935.*

The Geese and the Golden Eggs

by ELLERY A. FOSTER

TWO MEN each had a goose that laid golden eggs. Both knew that it is foolish to kill geese that lay golden eggs.

One of the men let his goose run in the fields and forests, picking her own living. She came home frequently and deposited a golden egg beside the doorstep.

The other man had a different plan. He followed his goose and observed her eating habits. He found that she preferred certain plants. The owner grew those plants in a special garden so that the goose would have plenty of her favorite foods. And the goose, eating more of them, began to lay more eggs, and the man prospered. He experimented and developed a feeding plan that kept the goose in the best laying condition.

Meanwhile, the man who left his goose to forage for herself noticed that she was laying fewer and fewer eggs. She ate the natural plants that she liked down to the roots. They became scarce. Then she had to eat foods that were not so good and that is why her egg production declined. Finally, this owner became desperate. Weeks had passed since she had laid an egg and it had been days since he had eaten. He looked longingly at the goose and thought how delectable roast goose would taste. But he didn't want to kill a goose that laid golden eggs. He thought and thought about it.

One Man Is Worried

After an interval, the fowl laid another golden egg, but the man was worried. He realized that he might have to wait several weeks until he got another egg. So he decided on a new policy. He lived more frugally, so that there would be less danger of going hungry before the goose laid again. By this policy, he was able to get along fairly well. He gradually reduced his standard of living, and he was able to eat every day, although his fare was simple and meager compared to what it had been.

The man reconciled himself to the change. He said: "The old days are gone. The virgin resources have dwindled. My goose and I must learn to subsist on less and less. By using less today I will have more tomorrow. My planned economizing is conservation, and it is necessary at the present stage of my life."

He took to reading books on economics, trying to learn how to economize more effectively.

The other man went on experimenting. He allowed his goose to set on one of the eggs and a gosling was hatched. The man felt greatly relieved, because he had worried over what would become of him when the goose grew old and died. Now, he felt, his future was assured. He would go on raising food for the goose and the gosling.

As the gosling grew up, it began to lay golden eggs, and finally the first goose died, but the man went on having a good life, busy part of the time caring for his second goose and garden and part of the time enjoying the leisure and comfort that they provided him. He was proud of his foresight and planning.

The Other Has Abundance

He said: "I have learned to work with nature and not against her. Because of it I can look ahead to abundance through all the years of my life. Even my children can have abundance if they follow the technology I have developed."

He read books on conservation and nature.

As time went on, the man whose conservation plan was that of economizing, had to scrimp more and more, because his goose, having to live off poorer and poorer food plants, laid few and fewer eggs. Finally he began buying feed for the goose. That helped in egg production, but it cut down on what the man could spend for himself. A time came when, with the best system of economy the man could work out, he was still hungry, too hungry to live without more food than he was able to purchase after buying for the goose. So he decided on a drastic course. He amputated his goose's wings and ate roast goose wings. Later he amputated the goose's legs and after that the wingless, legless goose lay in a box eating the food the man brought it, and occasionally laying an egg. Eventually the time between eggs became so long that the man was starving. Then to head off starvation a little longer, he killed and ate what was left of his goose that had laid golden eggs.

Contributors to this Issue

FRED A. CLARENBACH'S article is a report on an intensive study of local government in several central Missouri counties. His purpose was to establish some principles of reorganization for that and similar areas. He undertook the survey because of a combination of circumstances: The public purchase of much land in the area, the necessity for moving a county seat, reforestation, the realization of the need for a new land use pattern, resettlement plans, and the lowering of the tax base. Mr. Clarenbach, a native Missourian, is an associate agricultural economist in the Division of Land Economics, Bureau of Agricultural Economics. He is stationed at Columbia, Mo.

C. R. DRAPER is a junior sociologist in the Division of Farm Population and Rural Welfare, Northeastern Region. He is a graduate of the

College of the Pacific and has done graduate work in rural sociology in the University of Connecticut. E. J. Niederfrank is a professor of agricultural economics and rural sociology in the University of Maine, W. C. McKain, Jr. is Northeastern Regional leader of the Division of Farm Population and Rural Welfare, stationed in Upper Darby, Pa. He is a Harvard graduate and is preparing his doctor's dissertation on rural recreation. He writes that he would like to have comments from readers on aspects of recreation in other parts of the country.

Ellery A. Foster, master forester, is a senior agricultural economist in the Division of State and Local Planning, B. A. E.

B. H. Thibodeaux, senior agricultural economist in the B. A. E., is the leader of the activities of the Division of Farm Management and Costs in the Southern States. He is a graduate of Louisiana State University and has done graduate work at Iowa State College and Harvard University.

Morris B. Storer is a social scientist in the Division of Program Study and Discussion, B. A. E.

D. D. Hammerly and M. E. Hays are representatives of the Farm Security Administration in Iowa, the former as State, Community, and Cooperative Specialist, and the latter as Regional Cooperative and Community Services Adviser.

Davis McEntire and Seymour J. Janow are well known to readers of the Land Policy Review for their work on the comprehensive series about migration. Mr. McEntire, regional leader of the Division of Farm Population and Rural Welfare on the Pacific coast, has accepted a Littauer Fellowship in Harvard University. Mr. Janow is an assistant agricultural economist in the Division.

Books

Why Farmers Are Poor. *Anna Rochester. International Publishers. New York. 317 pp. 1940.*

by MORRIS B. STORER

AT A TIME when the sentence, "We've got to do something about our economic system," is so often spoken as to be almost a household phrase, yet when vagueness and evasion almost as often mark "the next paragraph," a book that sets out frankly and specifically to suggest what that "something" is takes on clear significance. Anna Rochester's "Why Farmers Are Poor" is such a book.

Here analysis is probing, uncompromising, relentlessly "radical" in its socialism. Readers will differ in their estimate of that analysis and of the program of agricultural and general economic reform that she proposes. But they will agree that she has turned up with her critical spade some principal roots of the Nation's predicament. Her writing wins respect by its studiousness and the general care of its documentation; her proposals provoke thought. She has taken her stand. Here is evangelism quiet and cool on the surface, seething underneath.

The story of farm poverty in this country, as Miss Rochester sees it, is the story of farmer exploitation in a capitalist society. Agriculture from the beginnings of capitalism has been tied up with it. The farmer has always been in greater or less measure a "business man, subject to general business conditions determined by the forces inherent in capitalist society." The increasing dependence of farmers on the market is the primary clue to the understanding of the development of agriculture since the middle of the nineteenth century, with the revolutionary changes in farming technique and the greatly heightened contrasts between rich farms and poor farms.

Why are farmers poor? Why is it that after paying its toll of rent and interest to nonfarm capitalists, the farm population—representing one-fourth of the total in the United States—had an income from agriculture that represented less than 9 percent of the total national income? Primarily because of monopolistic controls of the farmer's market. The farmers of the country, producing on a freely competitive basis, have "failed to create market outlets of their own strong enough to bargain on equal terms with the small groups of wealthy traders and processors."

At the base of the whole difficulty is monopoly pressure on farm produce prices from such agencies as "the giant millers and bakers, canners and meat-packers, dairy trusts and tobacco manufacturers, which under cover of performing a genuine economic function push down prices paid to the farmers and push up the prices they extract from consumers."

WHY ARE farmers poor? Because monopoly control of the market drives the individual farmer to raise productivity by improving technique and consequently by enlarging his scale of production. These, in turn, drive all but the few to dependence on capital borrowed from the accumulations of nonfarm capitalists, to deeper debt, to eventual insecurity and poverty. "Mortgages, tenancy, insecurity on the land; poorly equipped farms in competition with efficiently mechanized farms; low prices and restricted markets; domination by traders and processors, by corporation lenders and landlords." Thus Miss Rochester sums up the forces at work.

But of most direct importance in American farm poverty is the paralysis of wage-worker purchasing power due to the bogging down of capitalism. Over and over again Miss Rochester emphasizes the importance to agriculture and to the Nation of the farmer's making common cause with the industrial workers of the city, recognizing their common interests, and pressing for programs commonly contrived.

How much has been accomplished in the New Deal years toward the solution of these problems? The accomplishments are unimpressive to the author. Despite lending programs organized under the Farm Credit Administration and the Farm Security Administration, she says, "Farmers have not been released from their subjection to nonfarm private capital."

In efforts to bring supply and market demand into alinement with each other, the New Deal has attacked the problem at the wrong end.

"Farmers oppose the hideous absurdity of limiting production when hungry people need more products from the land." In this often-reiterated criticism, no account is taken of the abundance at present available in the elevators and warehouses of the Nation. The AAA is criticized for the size of its early payments to corporation farms and large land-owners, and "Even the present $10,000 maximum has allowed large-scale operations to receive benefits which might better have been distributed among the smallest farms." The program does not pretend to pay benefits in relation to the farmer's need.

"In spite of widespread compliance with the crop-restriction program, prices have failed to cover the farmers' average cost of production. With limited output, farmers' total income has remained far below precrisis levels."

About the Federal Surplus Commodities Corporation, it is complained that its program is concerned only with "surpluses" already produced and troublesome. "This distribution might be developed as a powerful instrument for relating production to the needs of the lowest-paid groups and the unemployed. But as it has functioned it is little more than a gesture."

Of the Fair Labor Standards Act in relation to these lowest-paid groups, the minimum wage rates have not assured workers "an adequate income" and relief has similarly allowed "only emergency diets and next to nothing for clothing and bedding and other supplies."

OF THE tenant purchase loans program, organized under the Bankhead-Jones Farm Tenant Act, the criticism is brought that "With three-quarters of a million sharecroppers and almost an equal number of other tenants on very small farms, this 'gesture' (17,000 farm purchase loans in the first 2 years after the act was passed) betrays a lack of seriousness in dealing with the problem . . . The appropriation must be a hundred times larger" and "the poor tenants must be more democratically selected."

What to do? Must farmers continue to "suffer extreme poverty until the whole system is changed"?

Miss Rochester proposes a program of immediate action which in her view could, if it were "well organized and aggressive, bring some relief even under capitalism on the issue of markets and prices." (1) Limit the profits of big middlemen by much stricter regulation of monopoly traders and processors, and by setting up Federal, State, and municipal government grain elevators, public stockyards, cotton warehouses, creameries, and pasteurization plants as yardstick competitors to private concerns. (2) Nationalize the railroads, "with a minimum of compensation to the present owners." (3) Heavier Federal taxes on large salaries and capitalist incomes, and on the reserves of great corporations. (4) Apply this increased revenue to the purchasing and distribution of "excess" farm supplies to families on relief. (5) Substitute for crop restrictions broad constructive measures to increase employment and mass purchasing power—for example, a determined Nation-wide attack on the problem of housing. Such measures "must not be held back by capitalist pressure against competition with private industry." (6) "A sharp writing off of farmers' debts." (7) Working farmers unite with the wage-workers of the cities.

Eventually Miss Rochester's book is an invocation to struggle.

"These immediate goals can not be achieved lightly, for they challenge certain cardinal principles in our capitalist system. But farmers have never been afraid of struggle for purposes that clearly affect their interest * * *. Only through an unshakable alliance between wage-workers and working farmers can the great productive forces of this country be released from the dead hand of finance capital. Only thus can the Government be made an instrument of the people. Only thus can it be compelled to place the need of those whom capitalism has driven to destitution above the demands and the intrigues of those who profit from exploitation."

Emphasis in this review has been on the basic philosophy of the book and on its proposals for reform in procedure. But attention should be directed, too, to the wealth of carefully organized and analyzed information on every phase of the agricultural situation included in the book. The data are drawn chiefly from the Census of Agriculture and from Department of Agriculture and other Government documents. Fact and interpretation are closely interwoven, but the composite constitutes a challenge of concern to all students of the agricultural situation.

√ For your attention

Standards of Value for Program Planning and Building. *132 pp. Bureau of Agricultural Economics. 1940.*

The proceedings of the School for the Washington Staff of the Bureau of Agricultural Economics are contained in this pamphlet. Included are reports of the lectures given by seven men on aspects of philosophy, sociology, economics, political science, history, anthropology, and education.

An Economic Study of Land Utilization in Yates County, New York. *M. D. Woodin. 52 p. Bulletin 727. Cornell University Agricultural Experiment Station. Ithaca. 1940.*

This bulletin describes how the land in Yates County—based on present land use, soils, size, and condition of farm buildings, topography and elevation, and market conditions—has been divided into nine classes. The main purposes of the classification, says Mr. Woodin, are to assist those who are interested in the land to put it to the uses for which it is best adapted and to form a basis for the development of services in rural areas.

Summary of Outstanding Laws Affecting Rural Land Use Enacted During 1939. *Kenneth Wernimont. 99 pp. Bulletin 51. Bureau of Agricultural Economics. 1940.*

This digest of outstanding legislation affecting rural land use enacted by the first session of the Seventy-sixth Congress and the regular and special sessions of State legislatures in 1939 was compiled primarily for the information of personnel of the Bureau of Agricultural Economics, Soil Conservation Service, and Forest Service.

Federal Relations to Local Planning. *Circular XIV. National Resources Planning Board. 364 pp. Processed. Washington, D. C. 1939.*

As a guide to the services and data available in the Federal Government for use in connection with local planning, the National Resources Planning Board has assembled statements concerning the general functions, activities affecting, and assistance to local planning, of 46 Federal agencies. Each statement begins with a brief description of the general functions of the Federal agency concerned. Then follows a more detailed account of those activities that are related to local government and planning.

Crops Against the Wind on the Southern Great Plains. *Glenn K. Rule. Farmers' Bulletin No. 1833. U. S. Department of Agriculture. 74 pp. 1939.*

This bulletin traces the circumstances that created the soil problems in the Southern Great Plains and shows how the hand of man has hastened present troubles. But it goes further and deals with the methods used to solve the problem on nature's own terms.

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UNITED STATES DEPARTMENT OF AGRICULTURE
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Editorial Notes and EXPRESSIONS

With this issue, Land Policy Review becomes a monthly, expands its circulation, and adopts a new format.

It has been published bimonthly since its start in 1938 as the successor to the Land Policy Circular. The Bureau of the Budget, upon the request of the Secretary of Agriculture, authorized the doubling of its free circulation list of 6,000. Many more agricultural workers now can get it.

But even this welcome increase will not make it possible to send it to everybody who is interested and will find it profitable. The answer lies in a larger number of paid subscriptions. Regulations determine who are eligible to get the publication free. To those who receive the Review gratis, the suggestion is made that they encourage the expansion of the paid list so that the Review may have the widest possible audience. Fifty cents sent to the Superintendent of Documents, Government Printing Office, Washington, D. C., will bring the Review for a year.

The redesign is the work of Frank H. Mortimer, director of typography, Government Printing Office, and L. H. Frankewich, assistant director. To them, and to Jerome J. Henry, Zebedee LaPelle, and Walter F. Conway, of the Office of Information, Department of Agriculture, go many thanks for help and advice.

Contributors to this issue: Oris V. Wells is in charge of the Division of Program Development and Coordination, Bureau of Agricultural Economics. Sherman E. Johnson heads the Division of Farm Management and Costs. H. E. Selby is the Pacific coast area leader of the Division of Land Economics. H. R. Hochmuth and Earl R. Franklin are farm management workers in the far western area. H. M. Coverley is the assistant director, Rural Rehabilitation Division of the Farm Security Administration. Conrad Taeuber is a member of the Division of Farm Population and Rural Welfare, B. A. E. James P. Cavin is a senior agricultural economist in the Division of Program Development and Coordination.

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How Many FARMERS DO WE REQUIRE?

By ORIS V. WELLS. *Sooner or later in discussions of the agricultural situation the question comes up, How many farmers do we need? Answers depend upon the assumption from which one starts or the ends toward which one wants to move. Here are indicated several approaches to the problem and the range of answers obtained.*

Let us approach the important question of the number of farmers needed in the United States by making two assumptions. First, that farming generally should be conducted on the same scale and farmers should have the same individual or family income as that which prevails in the Corn Belt, our most prosperous farm section. This assumption leads to the conclusion that only 5,182,000 farms and 24,202,200 farm people are needed, as against an estimated average farm population for 1936–38 of 31,774,000 and the 6,812,000 farms reported by the census for 1935. Almost all of such a reduction (of 1,630,000 farms and 7,571,800 farm people) would come in the East Central States and in the Cotton Belt.

Second, that it is desirable—in order to lessen unemployment, or maintain national morals, health, and population, and stabilize the national culture—to maintain the largest possible farm population. Our premise then is that farm operations should generally be conducted on the scale and comparable income of our most densely populated commercial farming section, the Cotton Belt. This assumption leads to the conclusion that our farm land could support about 9,643,000 farms (2,831,000 more than in 1935), and 45,032,000 farm people (13,258,000 more than the estimated 1936–38 farm population).

But, instead of assuming technical operations conducted nationally on the same scale as in the Corn Belt, we could try to estimate the quantities of food and fiber needed for domestic consumption and foreign trade and the amounts of labor required for their production, assuming reasonably good farm management.

In an effort to arrive at an answer following this approach, the acreage of crops, the number of livestock, and labor requirements needed to produce enough agricultural commodities to supply domestic consumers with an "adequate diet at moderate cost" have been used as a starting point. A comparison of this diet with the actual consumption in 1924–33 and in 1934–37 is given in table 2. These dietary requirements were translated into workers required on the basis of 2,000 work-hours per worker per year and the estimated hours' work required per unit of crops or livestock during 1924–29.

The estimated numbers of agricultural workers required to produce food sufficient for an adequate diet and nonfood products sufficient to maintain a reasonably high level of consumption for 131,000,000 people, the population estimate for 1940, together with enough commodities to meet prospective export demand, are:

For food	7, 800, 000
For nonfood	1, 150, 000
For export	1, 050, 000

TABLE 1.—*Amounts available for family living and farm population, average 1936–38, and estimated number and distribution of farm people assuming per capita incomes equal to* (*1*) *the average for the United States*, (*2*) *the average for 8 Midwestern States, and* (*3*) *the average for 8 Southern States*

	Gross farm income	Farm population	Income available for living		Estimated population if per capita income were equal to average for		
			Per capita	Total	U. S.	Corn Belt	Cotton Belt
	$1,000	*1,000*	*Dollars*	*$1,000*	*Thousands of persons*		
U. S.	9, 513, 225	31, 774	173	5, 493, 893	31, 757	24, 202	45, 032
N. East	1, 007, 267	2, 607	192	501, 380	2, 898	2, 209	4, 110
E. Central	1, 068, 808	6, 294	117	738, 246	4, 267	3, 252	6, 051
Southern	2, 075, 228	10, 805	125	1, 354, 022	7, 827	5, 965	11, 099
N. Central	3, 512, 853	8, 652	212	1, 838, 535	10, 628	8, 099	15, 070
Western	1, 849, 069	3, 416	311	1, 061, 710	6, 137	4, 677	8, 702

Regional grouping same as that used by the Agricultural Adjustment Administration.

Gross farm income and farm population as estimated by the Bureau of Agricultural Economics, average 1936–38. Income available for living is gross farm income less selected cash expenditures chargeable to farm production.

The Corn Belt includes Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, and Nebraska.

The Cotton Belt includes South Carolina, Georgia, Alabama, Mississippi, Arkansas, Louisiana, Texas, and Oklahoma.

TABLE 2.—*Average per capita consumption of food, 1920–33 and 1934–37, and estimated consumption required to supply an adequate diet at moderate cost*

Commodity or group	Average per capita consumption		
	1920–33	1934–37	Adequate diet
	Pounds per capita per year		
Cereal products	222	196	160
All potatoes	166	157	165
Sugar and sirup	110	110	60
Dairy products:			
Milk and cream	399	405	636
Manufactured	31	35	45
Fruits:			
Fresh	185	189	216
Dried	6	6	25
Vegetables	146	169	184
Lean meats and fish	133	126	100
Eggs	31	30	23
Beans, peas, and nuts	14	16	20
Fats, excluding butter	46	45	17

Based on estimated consumption of foodstuffs in terms of retail weight as reported in Consumption of Agricultural Products, The Agricultural Situation, January 1939, and quantities required for an "adequate diet at moderate cost" as reported in Diets at Four Levels of Nutritive Content and Cost, Circular 296, U. S. Department of Agriculture, November 1933.

Milk and cream includes whole milk, sweet cream, cheese, and ice cream in terms of whole milk. Manufactured dairy products include butter, cottage cheese, and condensed and evaporated milk. Fresh fruits include fresh and canned fruit in terms of fresh fruit. Vegetables include fresh and canned vegetables in terms of fresh.

Altogether, about 10,000,000 agricultural workers would be needed. Such data as are available indicate that there are between 11,500,000 and 13,500,000 workers who normally consider themselves gainfully employed, or who can be employed, in agriculture, including about 1,000,000 women, most of whom are in the cotton-producing region.

This indicates that even with our present technical equipment we could easily maintain agricultural output at what seems to be a reasonably desirable level by giving full employment to 80 percent of the farm people now on the land. And it seems reasonable to assume that with increasing improvement in technical methods and equipment, and with some reorganization of our farming system, we could eliminate most of the 1,000,000 women from farm employment and take care of the necessary seasonal overrun in labor with this same 80 percent of the current farm population. On this basis, we conclude that our land can support about 5,443,000 farms and about 25,419,000 farm people, as compared with the 5,182,000 farms and 24,202,000 farm people estimated at the outset.

Regarding our second assumption, it may be objected that the average individual or family income in the Cotton Belt would be insufficient to provide even minimum living standards for the great bulk of the farm population, and that the calculation should begin with a consideration of minimum, reasonable standards of living and the number of families the available farm income could have supported at such a level.

It is estimated that minimum physical requirements of food, clothing, shelter, and medical care could be supplied in the South for $550 per family, in the North for $630, and in the West for $660.

If allowance is made for somewhat better clothing and shelter and an additional $60 is allowed for education, recreation, churches, and charities and for contingencies not otherwise covered, it is estimated that minimum physical and cultural requirements could be met in the South by an expenditure of $705 per family; in the North, $820; and in the West, $845 per family.

Since $550 is only slightly under the average family income reported in the chief cotton-producing States and actually equals or exceeds the

TABLE 3.—*Estimated annual value, at 1936 prices, of minimum physical and cultural requirements for a farm family of 2 adults and 3 children in the 3 major regions of the country* [1]

Item	Value of minimum physical requirements			Value of minimum physical and cultural requirements.		
	North	South	West	North	South	West
Food	$385	$375	$405	$385	$375	$405
Clothing	75	45	80	125	80	125
Shelter	150	110	155	220	160	225
Medical care	20	20	20	30	30	30
Education	......	......	......	20	20	20
Recreation	......	......	......	10	10	10
Church and charity	......	......	......	10	10	10
Reserve for contingency	......	......	......	20	20	20
Total	630	550	660	820	705	845

[1] These estimates were made by M. Attie Souder, associate home economist, and arranged for this presentation by John A. Baker, associate agricultural economist, both of the Farm Security Administration staff in Washington.

In calculating the minimum diets for the maintenance of health, liberal use was made of foods that could be produced on the farm so as to displace as far as possible the necessity for purchasing food. Farm prices were used for foods produced on the farm and retail prices for foods that would have to be purchased. The estimated value of home-produced food was $270 in the North, $300 in the South, and $280 in the West. Household operating expenses and the maintenance of household furnishings and dwellings were included in the estimated annual cost of shelter.

Source: From James G. Maddox, Suggestions for a National Program of Rural Rehabilitation and Relief, Journal of Farm Economics, vol. XXI, No. 4, November 1939.

income reported in South Carolina, Georgia, Alabama, Arkansas, and Mississippi, it would seem that one could apply the estimated expenditures for minimum physical requirements to the income available for each of the regions in order to estimate the maximum number of farm people that might be supported on the land.

Carrying out this calculation, we conclude that approximately 9,772,000 farms or 45,635,000 farm people could be supported at this minimum level, as compared with the previously estimated 9,643,000 farm families and 45,032,000 farm people.

Or, if we use the estimated expenditures necessary to maintain minimum physical and cultural standards for the farm people, or the actual amounts available for family living, whichever is higher, the conclusion is that approximately 6,076,000 farms and 28,375,000 farm people could be supported on the land, as compared with the 5,182,000 farms and 24,202,000 farm people previously estimated, and the actual average farm population of 31,774,000 for 1936–38.

We conclude, then, that our farm land (assuming a market that will provide an income over and above the cash costs of production equal to that which prevailed in 1936–38) might support as few as 5,500,000 farms and 25,000,000 farm people or as many as 9,500,000 farms and 45,000,000 people, depending upon the initial assumption and the standards of living that farm people might be willing to accept. Which answer is correct?

There is no "correct" answer. We may move, and it may be desirable to move, in either direction; or it may be that our farm population will eventually stabilize at about the current level.

For those who want to argue that there are now too many farms and too many people trying to make a living out of farming, the chief questions ahead are:

Can nonagricultural employment be stepped up so as to help not only unemployed persons in cities but also the additional 20 percent of the farm population they would like to see moved from rural to urban centers, and those young people who will be added to those already seeking employment between now and such time as the national population may reach a stable level?

What devices are to be used to care for the excess farm population until the industrial and commercial problems just outlined are solved, since even the more optimistic planners doubt that an immediate solution can be achieved?

On the other hand, for those who believe that farm population should remain at its current level, and especially, of course, for those who believe that the present population should be increased, the most immediate question seems to be:

What steps or devices can be used to develop new ways of agricultural life that will involve smaller cash expenditures and a less urbanized existence than many farm people now seem to believe desirable, that will at the same time give to the people following such ways of life an amount of satisfaction and a degree of contentment equal to that enjoyed by other classes of the population?

How Many ACRES DO WE REQUIRE?

By H. E. SELBY. *Our farm problems would be much simpler if we could say that we need so many farmers on so many farms of so many acres. We cannot; a maze of factors and uncertainties complicate the subject: Crop failures, exports, mechanization, changes in diets, technological use of farm goods. These are examined here in the light of debates on the value of land reclamation.*

THE FEDERAL GOVERNMENT is engaged in a program of land reclamation for irrigating some 3 million acres of new land and providing supplemental irrigation for 3 million or 4 million additional acres in the next 2 decades. Many persons and numerous organizations strongly support this program. Many others look upon continued land reclamation as unnecessary and unwise. In this argument, the pertinent points include the land suitable for cultivation, crop acreage per capita, future land needs, and Government subsidies.

The Soil Conservation Service has estimated at 447 million acres the total land in the United States that is suitable for continued cultivation under the best soil conserving practices, including reclamation of all suitable land by irrigation, clearing, and drainage.

This would be an increase of only 8 percent over the total American acreage of cropland reported in the 1930 census, 413 million acres. A rather conservative population estimate for 1960 is 141 million people, an increase of 15 percent over 1930 and nearly twice as great as the maximum possible percentage increase in total acreage of land suitable for continued cultivation.

The question can be raised as to whether the 447 million acres will be available in 1960. Some of it will be used for farmsteads, rural residences, industrial uses, highways, recreation, suburban developments, et cetera. Even though such uses might aggregate several million acres, however, the amount would be well within the probable error of estimate in the 447-million-acre figure. More significant is the possibility that a considerable amount of the acreage will become unsuitable for cultivation through soil erosion. On the other hand, the 447 million acres is land considered good enough for continued cultivation. Probably there is much more that can be tilled intermittently in rotation with grass.

The Land Planning Committee of the National Resources Board estimated the acreage of harvested crops that will be needed in the United States in 1960 to be 374 to 386 million acres. But a fact commonly overlooked in calculating needs is that the required acreage of cropland is for crops that are harvested and must include an acreage of normal crop failure and of cropland normally idle or fallow in any given year.

In 1924 and 1929, the acreage of crop failure and idle and fallow land averaged 14.3 percent of the harvested crop acreage. The addition of this percentage (apparently the best available figure) gives an estimate of 427 to 442 million acres as the total crop acreage needed in 1960.

These figures approximate the Soil Conservation Service estimate of the total acreage suitable for continued cultivation—447 million acres. To have that acreage available by 1960 would require reclamation in the next 2 decades of 6 million acres by irrigation, 8 million by drainage, and 42 million by clearing, using S.C.S. estimates.

This exceeds the bounds of probability and even possibility, to say nothing of the present reclamation program.

The S.C.S. estimates contemplate the retirement of about 76 million acres not suitable for continued cultivation even under the best soil conserving practices. It is improbable, of course, that the use of all of this land for crops will be discontinued by 1960, but the question is raised of how much longer it can be tilled without becoming useless.

Total cropland was not determined by the census before 1925—only crops harvested. By increasing the acreage of crops harvested by the ratio in 1925 and 1930 of total crop acreage to crops harvested (1.143:1) and dividing by the total population, the following estimates of total crop acreage per capita are obtained, in comparison with the 3.4 acres per capita in 1930:

1880	3.8 Acres
1890	4.0
1900	4.3
1910	3.9
1920	3.8

The decrease from 4.3 acres in 1900 to 3.4 in 1930 is accounted for largely by the decrease in farm exports and by the substitution of mechanical power for horses.

The estimated 447 million acres suitable for continued cultivation represent 3.2 acres per capita of estimated population in 1960, compared with the 3.4 acres in 1930. In other words, full and sound development of all suitable land will provide less cropland per capita 2 decades hence than we have now.

Is it reasonable to expect that our cropland needs will be less in the future than they are today? The answer involves a maze of other questions and related factors, some of which are listed.

1. *Future agricultural exports and imports.*—Our agricultural exports have decreased about one-half in the last 15 or 20 years and now amount to less than 10 percent of the total market for agricultural commodities. Our agricultural imports now exceed our agricultural exports; in 1936 imports of competitive products even exceeded our total agricultural exports. The estimate of land requirements by the Land Planning Committee of the National Resources Board includes a smaller proportionate increase in exports than in domestic consumption; this

tends to reduce the acreage needed per capita.

2. *Substitution of mechanical power for horses.*—The number of horses and mules on farms in the United States declined from 25 million in 1920 to about 16½ million in 1935. An estimated 30 to 45 million acres required for growing horse feed thus were released. The National Resources Board report assumes that the number of horses and mules will increase about in proportion to total acreage after 1940, thus making no significant further change in acreage needed per capita.

3. *Changes in diet.*—Nutrition experts say that considerable increases in the consumption of dairy products, eggs, tomatoes, citrus fruits, and leafy vegetables are needed for an average national diet that can be rated good nutritionally. A greater use of dairy products and eggs, in place of cereal products, would require more land per capita. An analysis of crop acreage requirements to supply an adequate diet for farm population alone in eight Southern States indicated that 5.9 percent more cropland would be needed.

The determining factor will be purchasing power, which (as indicated by average per capita income) increased more than 30 percent from 1909 to 1929, dropped sharply during the depression, and is now up nearly to its high point.

Per capita consumption of animal products, especially dairy commodities, showed a net increase during the same period, although with wide fluctuations. Will these trends continue? The National Resources Board report assumed that increased consumption of livestock products would be just about offset by increased efficiency in the production of livestock products from feed.

4. *Crop yields.*—Average yields of important crops have not changed significantly for several decades, except for a decline in the average cotton crop as a result of boll weevil infestation, and a recent increase in corn crops through the use of hybrid seed.

Apparently soil erosion and depletion and an extension of cultivation to inferior lands have been just about balanced by improved crop varieties and cultural practices and by shifts in production from depleted land to new land.

With the end of the available new land in sight, the question is whether the present rate of soil erosion and depletion can be lowered sufficiently and soon enough to prevent cuts in average yields. Yields could be increased, of course, by better farming methods and the use of fertilizers, but it is questionable whether any significant increase in such practices will occur under present cost and price relationships.

5. *Less pasture acreage.*—Virtually all suitable land is used either for crops or for pasture or grazing. As the total acreage used for crops is increased, the available acreage for pasture and grazing will be lowered. The decreased production from such land will have to be replaced by production from cropland, and will tend to increase the crop acreage needed per capita.

6. *Technological use of farm products.*—The industrial use of certain farm products for the manufacture of a variety of products has grown

Many of the commodities are byproducts—for example, skim milk used to produce casein—but there is also an increasing use of primary products (such as soybeans for manufacturing plastics), and new commercial uses for cotton.

The acreage required, to date, for production of agricultural products for industrial use is doubtless insignificant in relation to the total crop acreage, but it probably will grow in importance and conceivably may augment to some extent the needed crop acreage per capita in the next 2 decades.

The Place of Reclamation

Alternatives to increasing our cropland acreage by reclamation are more intensive production on the present acreage of suitable land, and increased imports of agricultural products.

The debatable question of whether the permanent solution for unemployment is more people on the land on subsistence farm units or absorbing them by expansion of industry seems to be irrelevant to the need for land reclamation. Probably a valid argument for land reclamation is to provide new land to which farmers on submarginal land can move in order to facilitate retirement of such land from crop production.

A frequent criticism of further irrigation development arises from its apparent inconsistency with a program for reduction of surplus crop production. The reclamationists point out that irrigated lands produce comparatively little of the major surplus crops—wheat, corn, cotton, and tobacco. Probably the chief increase in production from increased irrigation will be in dairy products, for which the trend in demand should be upward. There is serious danger, however, of overproduction of certain specialty crops, especially fruits and vegetables, on irrigated land.

Finally, an aspect of land reclamation that bothers many persons is the government subsidy that is involved and appears to be necessary. Various arguments can be advanced in support of at least a certain amount of public subsidy. Subsidy in land settlement and development has been more or less traditional in this country—free homesteads, land grants to railroads, grants for swamp land reclamation, and the like. If these lands, because of better quality and productiveness, effect more efficient and cheaper production, the general public is benefited by lower cost of farm products. Substitution of sound irrigation farming for the farming in many present submarginal land areas should reduce the hazard of crop failure and necessity for public expenditures for drought relief, emergency seed and feed loans, and livestock purchase programs. And at least to the extent that land reclamation substitutes work relief for a dole, public expenditure for it is not an additional cost.

Sheep Migrate, TOO, TO FOLLOW THE GRASS

By H. R. HOCHMUTH *and* EARL R. FRANKLIN. *In spring and fall, 6,500,000 sheep move to and from range lands. In their long treks they lose strength, cause higher operating costs, undergo hazards of climate and mountain trails, and subject a large area to one of the severest known land uses. Improvements are suggested in this article, part of a larger study concerning use and relationship of seasonal sheep ranges in the Intermountain West.*

WINTER comes early to the high intermountain region between the Rockies and the Sierra Nevadas, south of the Salmon River of Idaho and north of the Colorado River. By mid-September, aspens gild the hills. The first snow is imminent. In the valleys, Indian summer is reaching its height. The stage is set for the migration of 6,500,000 sheep from Federal range lands.

A definite pattern of life is followed by the rancher who operates sheep on our great Western range lands. In the summer, the animals graze on the high mountains, most of which are in national forests. In the fall, to escape early snows, the sheep literally pour out of the mountains down canyons, roads, and highways, through fields, towns, and villages. The flocks, in excellent condition from 2½ to 3 months of grazing on the green, fast-growing mountain forage, spread over the fall ranges, where most of the ranches and private lands are located.

The lambs, weighing about 80 pounds, are sold as feeders for fattening or as grass fat for slaughter. The breeding flocks spend 6 to 10 weeks on farm fields, ranges, and pastures, being conditioned for the trek to the winter desert range. November sees the first movements of sheep to the distant desert ranges allotted under the control of the Grazing Service.

Through the winter, the sheep operator must cope with a rigorous climate. The forage shrubs and grasses are dormant, dry and tough. If snow, the only source of water for the animals, is late, entrance to the range also is late. If the snowfall is heavy, the forage is covered and feed must be hauled in.

Usually in March the sheep start back to the spring range, the range that was used in the fall. The ranch headquarters is generally located here, and the operator attempts to arrive on this range in time for lambing and shearing. While the flock is being sheared, snowstorms and freezing spells can cause high mortality among shorn ewes.

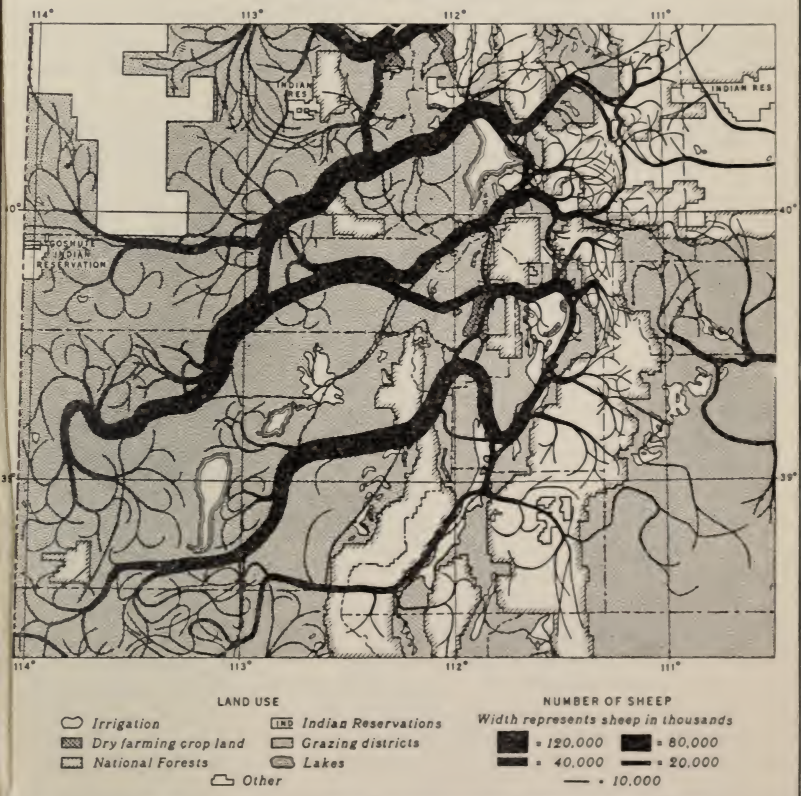
After 6 to 8 weeks on spring range, the forage becomes short, water becomes scarce, and the general movement to summer range begins. Again the mass moves up the canyons, roads, and highways, facing the dangers of topography, narrow trails, and vehicular traffic on the highways. Finally, the summer range is reached; the cycle has been completed.

Just as any crop must be harvested at certain seasons of the year, seasonal range forage must be harvested at a definite time. And just as agricultural laborers often follow the harvests from place to place, sheep migrate to harvest the forage.

Climatic and topographical conditions divide the intermountain range area into three major classes—winter range, summer range, and spring-fall range. The intermountain region includes all of Nevada and Utah, more than half of Idaho, a major part of Colorado, Wyoming, and Oregon, and small parts of Arizona and California.

MAJOR SEASONAL MOVEMENTS OF RANGE SHEEP, 1938-39

WEST CENTRAL UTAH

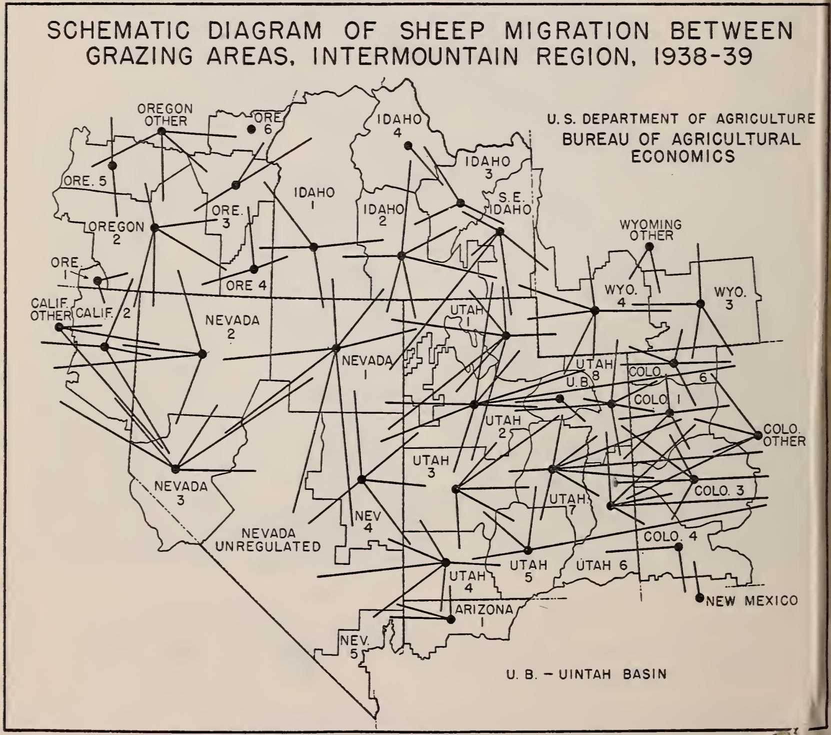


The summer range cannot be used in the winter because of snow, and the winter range cannot be used in the summer because of lack of water. Animals cannot be moved to summer range until the forage is ready. The plants must be given time to develop leaves and store food in the roots, thereby insuring proper growth of forage for the following year.

Thus, the range management technician has developed the concept of "range readiness," or that time when the forage has matured sufficiently to prevent range deterioration and keep the animals in good flesh. The sheepman is at the mercy of climate in deciding when and how much he should use his range.

In many ways the spring-fall range, the stopping place between the summer and winter ranges, is the buffer or critical portion of the year's operation. Climate and forage vary greatly from year to year, but the sheep must be kept on it in spring and fall until the other ranges are ready. Therefore, the spring-fall range has become depleted to comply with the physical limitations of the summer and winter ranges.

If proportionate amounts of the various seasonal ranges are not conveniently available, the sheepman may obtain a balance between seasonal ranges by reducing livestock numbers to the capacity of the least-productive seasonal range, purchasing or leasing additional sources of

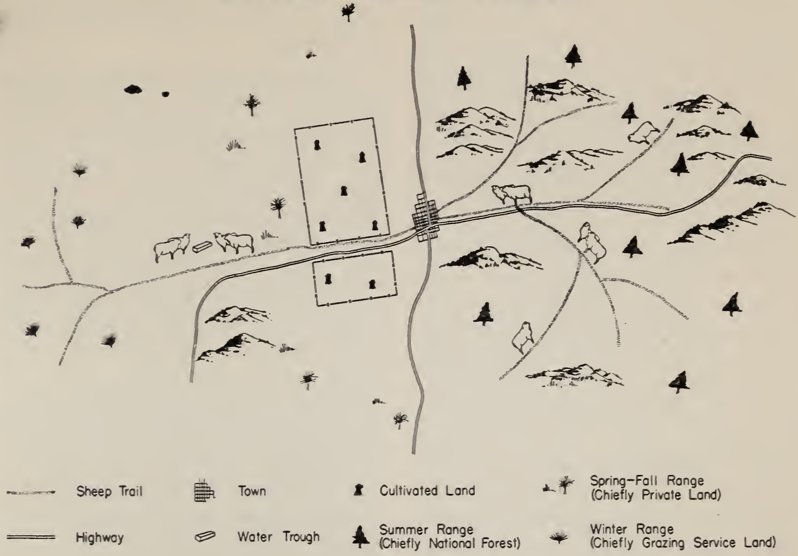


SCHEMATIC DIAGRAM OF SHEEP MIGRATION BETWEEN GRAZING AREAS, INTERMOUNTAIN REGION, 1938-39

U. S. DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ECONOMICS

U. B. – UINTAH BASIN

HYPOTHETICAL PICTURE OF THE SEASONAL RANGE COUNTRY.


Sheep Trail
Town
Cultivated Land
Spring–Fall Range (Chiefly Private Land)
Highway
Water Trough
Summer Range (Chiefly National Forest)
Winter Range (Chiefly Grazing Service Land)

forage nearby, moving considerable distances to obtain necessary seasonal ranges, grazing some ranges at a time that is undesirable from the viewpoint of maximum forage production, or overgrazing a range until other seasonal ranges can be satisfactorily grazed.

Some of these adjustments are unsound for maximum, sustained, forage production, but from the viewpoint of attempting to obtain a year-long balance, they assume critical importance in some areas for some sheep operators.

Interdependence of Range Areas

Grazing districts, set up by the Grazing Service, were used as a basis for delineating 37 grazing areas. Most of them include one grazing district and the enclosed or immediately adjacent national forests, patented, and other lands. Some of them contain as much as 13 million acres, the average of all grazing areas studied being about 6 million acres. The average area may be compared to Massachusetts, with approximately 5 million acres, and Vermont or New Hampshire, with about 5¾ million acres each.

Sheep located in an average area depend upon 4.5 additional grazing areas for the yearly forage requirement. Or, conversely, the average grazing area furnishes forage to sheep coming from 4.5 other places. Twenty-six percent, or 1,324 out of 5,031 operators, depend upon 2 or more grazing areas for sheep forage. (In general, these are the larger operators. An operator with few sheep cannot afford to drive them beyond his grazing area unless his base happens to be near the border or unless he can combine his band with that of a neighbor.) Of the 5,031 operators permitted on Federal range lands, 3,710 used 1 area only; 1,161 used 2 areas; 146 used 3 areas; and 14 used 4 areas. All statistical data have been calculated from the 1938–39 license and permit information of grazing districts, national forests, and other Federal reservations.

Land Pattern and Control of Seasonal Ranges

The methods whereby land was acquired, distributed, controlled, or reserved in the western United States have had an important bearing on the present pattern of use of range lands. The various land laws did not distribute the land in large enough units for grazing purposes. The railroads were granted large checkerboard strips of land through range areas. Individuals acquired small parcels around water holes, making possible the control of large areas. This indiscriminate disposal has tended to hinder the proper use of range lands.

National forests, established before 1900 in some instances, have been under the direction of the Forest Service of the Department of Agriculture for more than 30 years. These areas contain large parcels of range land, predominantly summer range, although some spring-fall and winter range is included. Since 1934, most of the public range, remaining unreserved and unappropriated, has been brought under positive management by the newly organized Grazing Service of the Department of Interior.

Other public ranges of smaller extent are managed by the Bureau of Indian Affairs, the National Park Service, Soil Conservation Service, and other agencies. Most of the grazing districts are winter and spring-fall range.

The individual sheepman may operate entirely on owned or leased land or on a combination of private and public lands. For some operators, the combinations of seasonal ranges and kind of land control may be simple in character and the various ranges nearly adjacent. Other operators may operate on ranges controlled by many agencies, and these ranges may be many miles apart.

On the basis of the control of the land upon which they operate, 33 percent of the operators are using grazing districts, national forests, and private land; 39 percent are using grazing districts and private land; and 26 percent are using national forests and private land. The percentage of operators using grazing districts and national forests varies widely between areas, depending upon the amount and quality of range offered by these two types of land ownership.

The ratio between the numbers of operators permitted on national forest and grazing districts is not indicative of the sheep-months forage obtained from these types of Federal land ownership, because the area, size of operation, and length of grazing season are all generally greater on the grazing districts.

Although the acreage of public lands in the grazing areas studied far exceeds the acreage of patented lands, only 51 percent of the forage of sheep using public lands is obtained on public range. The low grazing capacity of the publicly owned winter range and the relatively high forage-producing capacity of the private cultivated forage land largely explains this low percentage.

Sheep operators are classified in the following by types of land ownership upon which they operated in 1938–39:

	Number	Percent
Grazing district, national forest and private lands	1,667	33
Grazing district and private lands	1,946	39
National forest and private lands	1,332	26
Other land combinations	86	2

The list includes only the operators who were licensed or permitted on Federal lands. The bottom line refers to Indian reservations, national monuments, unregulated public domain, and other land combinations with or without grazing district and national forest use.

The following table shows the use by sheep of range lands of specified ownership or control in the same years.

Type of range	*Portion of total sheep months, percent*
Grazing districts	37
National forests	13
Patented land (owned by individuals, corporations, counties, States, and others)	49
Other federally owned land	1

Sheep Migration and Seasonal Ranges

Because seasonal ranges exist, the sheep must either be shipped or trailed to them. No seasonal range can be fully stocked year-long without deterioration of grazing capacity. If complementary seasonal ranges are adjacent, the migration is only local in character, but much of the winter range may lie great distances from summer range, and the movement of sheep may entail crossing one or more counties, grazing districts, or national forests.

The volume and length of some of these seasonal sheep migrations are surprisingly great to persons not familiar with the situation. Twice each year more than 100,000 ewes pass over several trails in Utah where topography forces concentration. Over parts of these trails young lambs add to the movement.

Throughout the intermountain region there are numerous trails which 50,000 or more breeding animals traverse annually each way. Topographic conditions, such as canyons, mountains, and lakes, town and farm lands, markedly influence the routes followed. This is illustrated for a small area in western Utah in the accompanying chart.

In some places, the sheep are forced into narrow trails, because the mountain sides are steep and the canyons narrow, or because only the roadway is a public thoroughfare. In other places, the sheep can spread out over wide areas, and can graze as they travel.

Most of the small bands do not travel more than 50 miles between their most distant ranges; but, as the number of sheep per operation increases, the travel distance becomes greater. When owners of small bands must drive their sheep far, they combine their bands into units of at least 1,500 for economic trailing. Of 804 operators who have more than 2,250 sheep, 369 or 46 percent travel more than 100 miles twice each year. When the sheep reach their grazing allotments, additional movement takes place to obtain the daily ration of forage.

Problems Resulting From Sheep Migration

The long seasonal migrations of large numbers of sheep are responsible for serious problems to the sheepman, to the range land, to small ranchers en route, to the public land administrator, and to the general public.

Long migrations sap the strength of sheep, with resultant high mortality and reduced lamb crops. Operating costs are increased because of travel to the range from the ranch headquarters, and return. The operator cannot exercise close supervision over his entire business without large costs in time and money. The life of the sheepman and his herders is made more difficult by the distance they must travel. The hazards, trouble, and costs must be balanced against the value of the forage obtained.

When the sharp hooves of 100,000 ewes and nearly as many lambs trample the vegetation and soils of a small area twice each year, the effect can readily be imagined. Plants are grazed very closely and then trampled out; the bare soil is loosened and soon erodes rapidly. Gullies have developed along some former sheep trails until they are no longer passable to stock. Sheep trailing represents one of the severest land uses known, and soils in the arid region, with their sparse vegetation, are ill-suited to such heavy use.

Migrating sheep consume all the available forage along their route. The small cattleman and farmer whose lands are adjacent to the trails find their range gone, particularly their spring-fall range. Their own livestock operations are seriously

Operators classified by numbers of sheep and by one-way trailing distance, intermountain region, 1938–39 [1]

Number of sheep per operator	One-way trailing distance in miles					Total operators
	1–50	51–100	101–150	150–200	Over 200	
1–275 [2]	976	74	28	5	6	1,089
276–750 [2]	492	71	43	29	7	642
751–1,250	390	117	42	24	6	579
1,251–1,750	159	78	36	18	3	294
1,751–2,250	129	77	41	27	6	280
2,251–2,750	65	55	36	25	15	196
2,751–4,750	51	70	80	39	35	275
4,751 or more	102	92	69	37	33	333
Total	2,364	634	375	204	111	3,688

[1] Includes only those operators obtaining grazing district or both grazing district and national forest use. National forest operators who do not obtain grazing district use are not included.

[2] Small operators trailing over 75 miles generally operate their sheep in cooperative or community flocks rather than as individual units.

impaired. The sheep furnish a market, but an uncertain one, for hay produced near the trail. In severe winters, all available hay is in demand, but in mild winters the hay stands unused in the stacks.

The public land administrator has many serious problems as a result of sheep migration. In the mountain areas, the natural trailways are in the canyons, which often have considerable scenic and recreational value if not damaged by sheep movements. The erosion of trails becomes a serious matter to the land administrator. Sound range management involves proper distribution of animals over the range, and proper utilization of the available forage. But if trails enter or cross a range unit, forage is depleted by concentrated grazing along them; while in other sections of the unit, forage may be only partly used.

Possibilities for Improvement

Several possibilities for improvement are evident. Often the length and volume of sheep migrations could be reduced by exchange of private holdings and better allocation of permits and licenses to use public ranges. For instance, two bands may meet and pass each other going to their respective seasonal ranges. An exchange would eliminate needless trailing for both.

Most of the sheep trailing of the intermountain region is inevitable as long as the ranges are used. Trails can generally be improved. Careful relocation can reduce the hazards to soil and vegetation. Water can be developed, to lessen the death losses en route. It may be necessary to arrange for feeding hay or grain at places along trails.

Trucking instead of trailing sheep is another possibility. Lambs ready for market are frequently trucked, but, as yet, few operators are convinced that trucking will pay in the case of breeding animals. One difficulty is that many roads are poor, even impassable to trucks during stormy weather. Some sheep are shipped by rail, but again, most operators are not convinced that this pays. Few of the railroads parallel present trails, or even lead from summer to winter range.

Feeding of hay on farms may prove more economic than trailing, at least to some winter ranges where the forage obtained is hardly worth the cost of going to it. This would not lessen trailing to and from summer ranges. At present, many parts of the intermountain region produce insufficient hay to feed range sheep in winter, even if operators were convinced that it paid to do so.

This first step in dealing with this problem is, obviously, to secure accurate information regarding it. The most common solution suggested to date has been to prohibit trailing in certain local areas, with the result that trailing is usually increased elsewhere.

County planning or other local groups, public land administrators, and others must have accurate and comprehensive information of the entire problem before they can proceed intelligently. No local group, nor any land administrator responsible for only one type of seasonal range, can deal adequately with this problem on the basis of their own information.

The Dilemma OF THE LAND HUNGRY

By H. M. COVERLEY. *In a country as big as ours, it seems impossible to have a "shortage of land." But the term begins to have more than an academic meaning when we find that 24,700 farm families were unable to rent farms in the Corn Belt during the past year—evidence, the author says, of "a chronic state of poor economic health."*

In American agriculture today, an irresistible force is meeting an immovable body. More people are trying to make a living from the land than ever before, yet fewer people are needed on farms than ever before. For the first time in our history, there is a serious shortage of land in the United States.

It is a relatively recent development, this shortage, but it has been on its way for some time. The reckless land policies of the nineteenth century played their part. So did soil-depleting cultivation by pioneers, who could always move on to more land further West. And so, more recently, did drought, technological developments, and loss of foreign markets.

The rising tide of tractors and other farm machines has also taken its toll in security. The man with the hoe—or at best a mule and a one-row cultivator—cannot hope to compete with the motorized harvesting combines, mechanical potato-diggers, and a whole array of other new equipment.

In 1930 there were about 900,000 tractors on farms. By 1938 this number had jumped to 1,527,989. There are no figures to show how many owners and tenants have been pushed off the land by this rapid mechanization, and by the resulting consolidation of small farms into large, commercialized farming corporations. The swelling tide of migrants is a clear indication, however, of what has happened, and individual cases come to light from time to time to support that indication.

For example, when one plantation began to use tractors and four-row cultivators, the management reduced the number of its tenant families from 40 to 24. Another plantation in the Mississippi Delta bought 22 tractors and 13 four-row cultivators, and let 130 of its 160 cropper families go.

This tendency toward mechanized "multiple-farm" operation is not a product of the last few years, or even of the depression. A survey by the Des Moines Register-Tribune this year disclosed that "most persons reporting widespread consolidation of farms in their counties assign its beginning to the early twenties." The same survey found that since 1929, in Iowa at least, the rate of change has been increasing steadily.

Bigger and "Better" Farms

That mechanization has been accompanied by increases in large-scale farming was made clear by the 1935 census of agriculture. These figures show that the number of farms of more than 1,000 acres increased from 80,620 in 1930 to 88,662 in 1935, an increase of almost 10 percent. At the same time the total number of farms increased by only 8.3 percent.

The comparable figures for increases in acreage bring out the same trend. The acreage of large-scale farms (more than 1,000 acres) was 276,212,832 in 1930 and had risen to 309,700,926 in 1935. This represented an increase of 33,488,094 acres, or more than 12 percent. During the same 5-year period, the total acreage of farm land increased by only 6.9 percent, the total increase being 67,744,095 acres.

If these same figures are considered from another angle, the trend toward large-scale farming becomes even clearer. For, although only 1.5 percent of the 5-year increase in the number of farms represented additions to the farms over 1,000 acres, these large farms accounted for nearly 50 percent of the total increase in farm acreage during the period. In other words, not only were large-scale farms growing more numerous, but at the same time they were growing bigger.

A partial result of this growth in huge farming establishments has been a significant diminution in the rate of growth of middle-sized, family farms of the type we ordinarily think about when we talk of "American farming." Moreover, there has been a rapid increase in the number of very small farms. Farms under 50 acres, which in 1860 accounted for only 29.4 percent of the total number of farms, now represent 39.5 percent of the total. Over the same period the number of farms under 20 acres nearly doubled. The trend therefore seems to be away from the middle-sized farm, toward farms either too big or too small for an individual family.

Farm income, consequently, is distributed in a way which tends to squeeze out the small farmer. As early as 1930, about 90 percent of the marketed farm products came from the land of half of the farmers. The rest of the farmers were getting only one-tenth of the total cash income of agriculture. At the present time, it is probable that nine-tenths of the farm market is supplied by even less than half the Nation's farms.

More and Poorer People

Land is one side of the dilemma; population is the other.

To say that farmers are being forced off the land is in a sense inaccurate. Farmers become landless, to be sure, but there is no outlet which actually takes them off the land. The vast majority of them must make a living on the land or not make a living at all. They become day laborers, and many of them take to the road as migrants, joining in the mad rush from harvest to harvest, eking out a precarious existence on seasonal work and odd jobs.

The widespread urban unemployment which came with the depression meant that opportunity in the cities was closed, and cityward migration fell off sharply. In addition, millions of workers who ordinarily would have sought employment in the cities, were "backed up" on the farms during the depression.

By 1935, twice as many families were trying to make a living off southern farms as in 1860, with fewer acres actually in cultivation. In 1939 it was estimated that the Nation's visible domestic and foreign needs could be supplied by 1,500,000 fewer farm workers than in 1929. Yet in the same period total farm population actually increased by 1,830,000.

There, in a nutshell, is the dilemma of insecurity: How to reconcile increased population pressure on the land with the contraction of opportunity for making a living off the land? In this game of "Going to Jerusalem," the chairs of economic opportunity are removed one by one, but the players all remain in the game, fighting more and more desperately for the few which are left.

Shortage of Land: 1940

The trend in 1935 is clear from the census of agriculture taken in that year. Is the trend the same in 1940? Has the tendency toward diminished security perhaps become more pronounced? No general answer can be given until the 1940 census figures are tabulated. But a partial answer to this question was given in May through a survey in the Corn Belt, including Ohio, Indiana, Illinois, Iowa, and Missouri.

F. S. A.'s regional director for those States asked his county supervisors how many farm families were unable to find farms to operate during the 1940 crop year. He discovered that out of approximately 58,000 F. S. A. borrowers in the region, 2,336, or 4 percent, had been unable to find farms. He found that another 6,246 eligible applicants for rehabilitation loans were in the same position. The county supervisors reported that they knew of still another 16,120 renters, not applicants for F. S. A. assistance, who could not find land to farm.

Nor do we need to use guesswork in assigning the reason for the inability of these farmers to find land. The reason most frequently cited by the supervisors themselves was "expansion of farm operations and increase in the size of farms due to improved equipment and mechanization."

Universal

Whatsoever road man takes in this world, he comes finally to agriculture, the most universal occupation of men, the most holy and natural, and the only one to which our first fathers were commanded by the mouth of God.

—OLIVER DE SERRES

Now the "Corn Belt" region is not in the Dust Bowl, nor are the five States which it includes generally spoken of as "drought States." Quite the contrary. Midwest farmers in the Corn Belt have traditionally been one of the most prosperous groups of American agriculture. Here destitution and insecurity have not, as in some other portions of rural America, been the normal way of life. So, when we find that 24,700 farm families were unable to get located at all during the past year in this region, when we see that farmers are being forced off the land even in the most prosperous farming area in the United States, the term "shortage of land" begins to have more than an academic meaning.

Toward a Solution

What to do? Nobody, of course, knows the whole answer. But much depends on this basic question: Is it economically feasible to establish family-type farms in competition with these large industrialized "outdoor food factories"? To this question the Farm Security Administration, through its rehabilitation program, is drafting an affirmative reply.

F. S. A. has naturally been able to reach only a part of those who need help. However, in its 5-year attempt to stanch the flow of men from the soil, it has developed programs and techniques which may provide the basis for a really widespread attack on the problem of agricultural insecurity.

Nearly 30,000 families have been able to buy their own homes under the tenant purchase and homestead development programs. Some 800,000 families have gotten a new start through rehabilitation loans. In general, these families have been able to compete successfully with the forces which drove them from their land.

How has this been done? Not, assuredly, through a return to the old patterns of cash-crop farming, soil depletion, and blind individualism which once made these same families the easy prey of erosion and drought, depression, and mechanization. It has been done through the adaptation of multiple-farm economics to the family-type farm; and through emphasis on farming as a way of life rather than as a way of making a living for somebody else. Cooperation, diversification, subsistence farming—these are F. S. A.'s chief contribution to the dilemma of insecurity.

Farming: A Way of Life

Heretofore large capital requirements and heavy overhead made it impossible for the small farmer to enjoy many of the operating advan-

Chosen

Those who labor in the earth are the chosen people of God, if ever He had a chosen people, whose breasts He has made His peculiar deposit for substantial and genuine virtue. —Thomas Jefferson tages of his larger competitor. This problem is being met through the cooperative action of borrowers and other small farmers, who form associations and receive F. S. A. loans for the joint purchase or rental of tractors and other heavy equipment, breeding stock, canning facilities, fertilizer, seed, and other necessities.

Diversification of crops has meant more than planting one or two additional cash crops so that the family will no longer be dependent on the price fluctuations of a single commodity. It has meant developing a market in the farm home for the fruits and vegetables, meat and milk produced on the farm.

The farm family's real income has thus been substantially increased. A survey of 360,000 F. S. A. borrowers at the end of 1939 showed that since receiving their loans they had increased the total value of their home-grown products by $34,878,253.20, or an average increase of $96.88 for each family.

In spite of this showing, the family-type farm must count its largest dividends in terms of better living standards rather than in the dollars-and-cents calculations of industrialized farms. More efficient production on the small farm cannot now mean the acquisition of more acres for the entire family to work. It can and does mean freeing women for domestic pursuits, more education for the children, the devotion of more effort to improving the property as a farm and as a home, and more adequate attention to the health and recreational needs of the family. This is what is meant by farming as a "way of life." It has long been recognized as a desirable social end. The fact that it can also be regarded as an economic goal has been slower to achieve recognition.

The program of the Farm Security Administration gives great promise for the future. But excellent drop though it is, the bucket which it is trying to fill is still large—and largely empty.

This is an emergency for the whole nation. It is not a sudden attack of indigestion, but rather a chronic state of poor economic health, which can at any moment flare up into some acute and dangerous malady. It threatens the lives and living of that quarter of our population which is pressing against our constricted acreage. If the amount of land cannot be substantially increased, at least we can concentrate on making the same amount of land support more people.

Managing THE FARM BY LONG DISTANCE

By SHERMAN E. JOHNSON. *What Farmer John Doe should plant on his 120 acres in Missouri, how many cows he should milk, and what rotations he should follow are determined, as likely as not, in the towers of Manhattan, the banks of San Francisco, or offices in Washington. This, Dr. Johnson says, may not be an unfavorable development, but it means that certain problems must be faced.*

WE ARE accustomed to thinking of the farm operator as independent—a man who makes his own business decisions, who decides what equipment to buy, what crops to grow, and what livestock to keep. In fact, farming is considered the last stronghold for individual management units in our economy. Our 6½ million farmers are supposed to be operating as they please.

But, as a matter of fact, most farmers share their management decisions with others, and in some cases may have little if any voice in management. Especially on the commercial farms, separation of management responsibility from the farm operator has taken place along three principal lines: Through the landlord-tenant relationship; through the debtor-creditor relationship; and through the public programs and certain regulatory activities.

In some regions, the separation of management functions from the resident operator is not a new development, but on most farms in all regions farmers are having less and less to say about their own operations.

It is also evident that the management problem differs greatly on the various types and sizes of farms in the several agricultural regions.

Compare, for instance, a Mississippi Delta cotton plantation, employing 100 or more cotton tenants, with a family-operated cotton farm in the hill areas. A highly commercialized corn-hog-beef cattle farm in the western Corn Belt presents a very different management problem from a small general farm in the Appalachian Highlands that produces a major portion of its products for direct consumption by the farm family.

The sizes and types of farms we now have are the result of many forces. Some are related to the land resources of the area, and to the institutional setting within which the farmers are operating; some to the adaptability of the farmers themselves. In general, the more commercialized the farm business has become, the less the operator has had to say about managing his farm.

Everyone recognizes that tenant farming involves a sharing of management duties with the landlord. The landlord's responsibility varies considerably; he makes nearly all decisions under cotton-sharecropper tenancy, but in specialized wheat areas his primary concern is to get his share of the crop.

The percentage of tenancy has been increasing; and with 41.3 percent of all farms entirely tenant-operated in 1935, the separation of the management function in this direction becomes important. Moreover, much land has shifted into nonresident ownership in many areas, and this changes the place and the conditions under which the landlord's decisions will be made.

When more than 15 percent of Iowa farms are owned by corporations (largely insurance companies), many managerial decisions are made in New York, not on the farmstead.

On the other hand, the retired farmer who has rented his farm will talk things over with his tenant on the farm, where both parties can see the problem first hand.

The division of managerial responsibility that is involved in the debtor-creditor relationship has not been so well recognized as the landlord-tenant relationship.

But creditors, local bankers especially, long have exercised considerable authority over operations on farms where they have placed their loans. The higher the loan in relation to the investment, and to the annual earnings, the more nearly the debtor-creditor relationship becomes a business partnership. Many credit agencies therefore have organized supervisory units to furnish guidance on the farms where they have placed their loans. When we learn that 41.5 percent of the full owner-operated farms had real estate mortgages in 1935, we realize that creditors exercise management responsibility on many of our farms.

The facts that 10.5 percent of the farms are operated by owners who rent additional land, and that a large percentage of these are mortgaged, besides being partly tenant-operated, lead to the conclusion that management responsibility is divided either by the landlord-tenant relation or by the creditor-debtor relation on about 70 percent of our farms.

To some extent the public action programs limit the scope of the decisions made by the operator and the others who share this responsibility with him. The western rancher who uses public lands for his range has his activities closely circumscribed by such agencies as the Forest Service and the Grazing Service. Limitations imposed by public programs and by regulatory activities represent the injection of society's interest in the management of our agricultural resources.

They may, for instance, result in conservation of soil resources. Some of the regulatory activities, such as those involving milk production, are devised directly to protect the health and well-being of consumers.

The rehabilitation program of the Farm Security Administration deserves separate mention. It involves the application of social case work to rural people. Loans are used as one of the means of rehabilitation. Approval of a loan is given only if a satisfactory farm plan is worked out by the client and the F.S.A. supervisor, who furnishes management assistance throughout the period of the loan. Thus the F.S.A. assumes an important share of the management, and, since most of the clients are renters, the management activities of the resident operators are limited in two directions.

All this is not necessarily an undesirable development. But, it does indicate a need for recognizing that this division of duties and decisions has taken place, and that, as a result, certain problems should be faced.

The most important arise from the fact that the different persons concerned with management do not have identical interests. A farming program that conserves the soil may actually result in a higher net income over a period, but the tenant farmer with a 1-year lease is interested only if the program results in a higher income for that year.

The owner-operator heavily in debt may find it expedient to mine the soil in order to meet his payments.

On the other hand, investment in more livestock might greatly increase income and facilitate debt payment, but the creditors refuse to extend more credit. Sanitary regulations for milk production may be too costly for the man with only two or three cows. When the final decisions on management questions are made far from the scene of action, there must be prompt attention by well-informed personnel, or the result may be detrimental to good farming. There is a need for men of practical experience and adequate training to exercise the management responsibility of persons other than the resident operator. If this trend toward supervised farming continues, the need will become even greater.

Books

Rural Regions of the United States. *A. R. Mangus.* Work Projects Administration. Washington, D. C. 230 pp. 1940.

Youth—Millions Too Many? *Bruce L. Melvin.* Association Press. New York. 220 pp. 1940.

Mothers of the South. *Margaret Jarman Hagood.* University of North Carolina Press. Chapel Hill, N. C. 252 pp. 1939.

by CONRAD TAEUBER

WHEN THE F.E.R.A. first embarked upon its program of rural research, it found an immediate need for some device for selecting a representative sample from among the 3,000 counties of the United States in such a way that accurate pictures of the total situation could be secured at a minimum of cost—a major problem in sampling.

The county was necessarily the unit of sampling, but the techniques for selecting sample counties had not yet been adequately developed for this purpose. Mr. Mangus undertook to work out the solutions to this practical question, and found that it was necessary to develop a statistical description of the United States, showing the variation from county to county on a large number of factors. It soon developed that just as the farm management experts had been able to describe type of farming areas on the basis of the census reports of 1930, so there were areas within which there was a high degree of homogeneity in relation to social factors. These are basic areas which should be sampled in order to secure representativeness in the returns from any extensive study which might be undertaken. These smaller areas in turn grouped themselves into larger areas, characterized by a high degree of similarity, which may be called regions. Thus, an empirical base is provided for such common terms as Cotton Belt, Southern Appalachians, Lake States Cutover, and so on. Two hundred and eighteen subregions for the rural farm population were grouped into 32 general regions and when the characteristics of the rural nonfarm population are taken into account there are 264 subregions and 34 rural regions.

THESE REGIONS and subregions were originally designed to provide samples for studies of rural relief trends and unemployment problems, and their utility for this purpose has been adequately established. But beyond that they will undoubtedly prove of value to students analyzing other social conditions, and they should be of value to administrators concerned with planning programs to fit specific areas and situations and with laying out the territory for decentralizing administrative functions.

Three different sizes of representative samples have been selected for both the rural farm and the total rural population, illustrating the techniques by which still other samples might be selected for other purposes.

Some objections have been raised to this definition of regions in that they are not cultural in the sense of being based on the distribution of strictly cultural traits, rather than the distribution of economic factors or material traits. In a sense that is correct, but it is primarily a criticism of the data which are available for such an analysis. The fact that such a cultural trait as the population fertility ratio, which was a major factor, correlates highly with the distribution of the material traits used suggests that when more strictly cultural factors can be introduced into a regional description of this type, the lines as drawn may not differ much from those which Mangus outlined.

A major test of the validity of the regional lines will be possible when the 1940 census data become available.

THE PRESENT regional lines are based chiefly on 1930 census materials, because so few county data were available for earlier periods. If it should develop that these regions can be described with a high degree of stability in time, a major contribution to social research will have been made by providing a usable number of homogeneous areas for statistical manipulation or as a basis for sampling in a manner which permits some knowledge of the universe of which the sample is representative.

Even if it turns out that with each succeeding census some redrawing of the lines becomes necessary, this attempt still has a value far beyond the immediate purpose for which it was undertaken. It makes a major contribution to the elimination from research reports of such vague statements as "The area was selected on the basis of the best judgments available and is believed to be representative of the larger area shown in figure 1."

No set of regions will serve all purposes, but here is a set which will serve many of the needs in social research, and its widespread use should reveal the weaknesses which may be inherent in this approach and at the same time contribute toward placing studies of samples of many kinds into their proper framework, thus making the application of conclusions from them to the universe much more direct. That is a much-needed improvement in methodology.

NO ONE who is concerned with agricultural planning and with the conservation of human and natural resources can neglect to deal with the problems considered in Mr. Melvin's book. The author contends that youth, the greatest resource which we have, may easily become a liability unless intelligent steps are taken to integrate the maturing young people into the social system which they will eventually dominate.

The book calls for thought that leads to action, while "we yet have time to think"—intelligent action that avoids panaceas but does not hesitate to try approaches which, though partial, nonetheless promise to aid in bringing solutions a step nearer.

During the past years, Melvin has carried through a number of studies of the problems of youth, and has prepared several research monographs dealing with this subject. The present volume is a summary which gives the nontechnical reader the gist of much of the information that has been gathered in recent years by the many agencies which have been making research studies.

In case histories, testimony of young people, and tersely stated summaries of research reports he examines the situation as it has developed from the convergence of five major trends: Destruction of forests and soils, growth of cities, concentration of wealth, the increasing dominance of the money economy, and the declining rate of population growth. The special problems of farm youth, village youth, city youth, and Negro youth are examined in detail. The situation having been described, critical attention is turned to some of the efforts that are being made to do something about the problem.

The incongruity of much of the present educational training in the light of job opportunities and the importance of uniting intellectual and work education are analyzed. Leisure time activities and the provisions made for constructive use of leisure time, the activities promoted for youth, and the activities promoted by youth groups are described, with considerable attention to the youth groups which have recently attracted attention in the press.

A chapter on youth and democracy provides some warnings on what has happened elsewhere when the problems of youth were either not considered or the solutions offered were inadequate. Finally there is a plea for action, both along the paths already tried and along lines still to be charted.

The title of the book with its chapter headings, such as Unneeded Farm Youth and Unwanted City Youth, states the question that is posed throughout the book. The author's answer to the question, as well as the urgency of the problem, can best be summarized in his own answer to the question, "Millions too many?" He replies, "No; not if America is to remain the land of high hopes, of humanitarian ideals, of freedom, which have been her strength."

SOCIAL statisticians, like other scientific workers, are frequently in danger of denying existence to those phenomena which they cannot measure with the techniques available to them. As a result, there have been many sterile debates on the merits of various methods, for example, much of the debate about the relative merits of case study versus statistical study.

Mrs. Hagood brought to her problem the critical approach to the sample and to generalizations from it which grow out of her statistical training, but the materials which she needed called for techniques other than those usually available to statisticians. She held long interviews with subjects who were likely t be suspicious of the outsider who showed an interest in their personal affairs.

Her approach was through a friendly conversational "just-a-visit" tone, but a schedule was used to record the information on all essential topics of the study. A large number of the mothers interviewed were visited twice and some of them as often as six times. The visits varied in length from half an hour to 4 hours, most of them lasting about an hour and a half. Throughout, the emphasis was on the normal, rather than any pathological situations. The presentation makes use of the mode and the range throughout and stresses the important fact of variation in even a fairly homogeneous group.

The result is an unusually penetrating portrait of that part of the agriculture of the South which centers about the white tenant farm woman — her activities and her attitudes in relation to field work, housekeeping, child-bearing, child "raising," wifehood, community participation, the transition from childhood to motherhood, and middle age and mother worries.

In her very readable account, Mrs. Hagood succeeds in portraying the daily round of life and the attitudes and the motives of the farm women which help to give meaning to their day-by-day activities.

Here one sees the woman in the triple role of mother, housekeeper, and field worker; frequently preferring field work to housework, often boasting of the ability to work like a man, but leaving the planning and managing of the farm entirely to the husband.

Large families are a matter of pride, but many mothers wish for no more children. All activities are directed toward the farm, children, and home, rather than toward inner goals demanded by inferiority feelings or other internal maladjustments. Economic necessity leaves no time for intellectual contemplation, educational training has supplied neither content nor tools for the solution of her problems, isolation has prevented the stimulation from contact with people and the diffusion of more efficient techniques, the cultural heritage holds these mothers to their tasks and in their places with the sanction of God and the Southern tradition, and there is no escape from the system.

With the increasing recognition of the importance of attitudes, emotions, habits, and cultural patterns in the lives of all people and the necessity of understanding these if agricultural programs are to be put into action, this book fills one gap in our knowledge. Perhaps it will soon be possible to have some equally skillful person interview the men on farms similar to these and, thus, help to round out the picture which is begun here.

GOVERNMENT AND ECONOMIC LIFE, VOLUME I. *L. S. Lyon, M. W. Watkins, and V. Abramson.* The Brookings Institution. Washington, D. C. 519 pp. 1939.

GOVERNMENT AND ECONOMIC LIFE, VOLUME II. *L. S. Lyon, V. Abramson, and associates.* The Brookings Institution. Washington, D. C. 520–1301 pp. 1940.

by JAMES P. CAVIN

THE AUTHORS, of whom the three named in the citation are responsible for Volume I, while nine share responsibility for Volume II, aim to "analyze the relationship of government to economic life as a whole in terms of fundamental economic and social functions and fundamental governmental activities."

Such analysis, however, excludes consideration of the "soundness" of public policies; and although analysis of the consequences of alternative lines of action is deemed desirable, "the wide range of problems dealt with . . . makes such an analysis impracticable for all of the spheres discussed" and cannot "be undertaken for limited areas without giving the study a biased and unbalanced emphasis."

In the end, the authors narrow their task to the interpretation of "the development of each major phase of public policy in terms of the significant economic and social forces which have conditioned it," and to the presentation of "current trends and frontier issues."

These two volumes are essentially source books, and perhaps the best service a reviewer can perform is to indicate in some detail their organization and content.

The relations of the Government to economic life are viewed as taking two fundamental forms: Implementation and regulation of private enterprise, and direct production of goods and services by governmental agencies.

Practically all of Volume I is devoted to "governmental implementation and regulation of private enterprise as it has been applied generally to a wide range of industrial and commercial life, without important distinctions between one type of industry and another."

Six chapters are devoted to implementation in the form of the "provision of instrumentalities" and one to implementation in the form of "provision of knowledge." Following are nine chapters dealing with regulation.

The chapters dealing with instrumentalities designed to implement private enterprise in general cover five topics: Organizational forms for business enterprise, bankruptcy and reorganization procedures, patent rights, a monetary mechanism, and a mechanism to adjust labor disputes. The chapter on provision of knowledge deals with the growth of standardization, research and the dissemination of knowledge.

The chapters dealing with regulation in general cover four broad topics: The maintenance of competition; the enforcement of ethical standards; the restriction and facilitation of concerted action among workers; and the regulation of terms and conditions of employment.

Under these headings are such items as the common-law roots of antimonopoly policy; the Sherman Antitrust Act; the trade association movement; the Federal Trade Commission; the problems of interlocking directorates; resale price maintenance and price discrimination; regulatory activities under such legislation as the Food and Drug Act and the Commodities Exchange Act; the law of conspiracy; the injunction; the National Labor Relations Act; strikes and boycotts; child labor; physical safety of workers; and minimum wages.

Volume II shifts from the implementation and regulation of private enterprise in general to that of particular segments of the economy and in certain periods of time. The scope of this treatment is for the most part sufficiently indicated by the chapter headings: Foreign Commerce (a review of tariff policy); Public Utilities ("the controls exercised by government, municipal, State and Federal, over the telephone, telegraph, electric power and light, and manufactured and natural gas industries"); Transportation; Agriculture; Bituminous Coal; Petroleum and Natural Gas; Foods and Drugs. The topics treated as belonging to special time periods are the National Recovery Administration and War. The National Recovery Administration period is regarded as one during which the whole of private industry was temporarily converted into specially treated segments. The chapter on War covers World War experience and certain recent events, principally plans for industrial mobilization and neutrality policy.

THE foregoing topics account for about three-quarters of Volume II, the bulk of the remainder being devoted to direct production of goods and services by governmental agencies. Separate chapters are allotted to the Government as a producer of final goods and services (education, highways, welfare services, public health, hydroelectric power, housing); public relief; and social security.

Finally, there are certain chapters that verge into general economic analyses. These are the first two chapters in Volume I dealing with basic economic concepts and factors conditioning the development of relationships between government and economic life in the United States; a final chapter in the same volume summarizing new trends and developments; and a chapter of concluding observations in Volume II.

It is not feasible to review in detail the separate chapters, each of which is a substantial essay by a competent specialist. Their value will vary with the interests of the reader. Such chapters as those on the organizational forms of business enterprise, maintenance of competition, the banking system, transportation and agriculture cover more or less familiar ground, though all contain valuable recent material.

The chapters on public utilities, the plane of competition, bituminous coal, and concerted action among workers appear to the reviewer to be particularly valuable syntheses of complex, though generally familiar, fields. The chapter on the N.R.A. summarizes an earlier Brookings study. That on war is timely, but a more extended treatment would have been profitable. Many will welcome the chapters on the Government as a producer of final goods and services, public relief and social security, as providing integrated accounts of new and dispersed fields. Most of the chapters contain summary statements with varying emphasis on appraisal and the elaboration of issues.

Some of the findings in the chapter on agriculture may be of special interest. It is held that with the Agricultural Adjustment Act of 1933, the Government assumed two new positions with respect to agriculture: (1) It "accepted responsibility for restoring the material well-being of farmers as a whole to the level that they had occupied in their most favored previous peace-time period," and (2) passed "from the role of advisory guidance to one of over-all planning and implemented activity designed to determine both the direction and magnitude of agricultural enterprise." Agriculture has become "patently an area of special treatment by State and Federal Government, particularly the latter." This inclination to special treatment is motivated by (1) "agricultural fundamentalism," implying a belief that "agriculture is the base of the economic pyramid and upon it the strength and soundness of our entire economic system depend," and (2) "the technical and economic character of the industry itself," where "wide geographical dispersion, with persistent adherence to a very small unit of business organization and management" has prompted the belief that the Government should furnish large "overhead units of service, management, and economic organization" somewhat analogous to those which characterize large-scale units in industry, commerce and finance.

IF THIS new scheme for agriculture "means not merely the largest potentiality of efficiency or collective planning but also maximum power for collective bargaining or group pressure in agriculture, we shall have a scheme of organization which, in the absence of a philosophy of moderation, might conceivably be used to the end of exploiting other industries or departments of the national economy." The economic and social soundness of this new organization of agriculture "must depend on the conscious philosophy of those who are directing and participating in it." An important aspect of this larger issue is the problem of subsidy payments. If these are to be continued, "or if they are to be wisely reduced and readjusted as to direction and timing, there is demand for greater understanding on the part of both rural and nonrural people as to the incidence which such manipulations of the national income have upon the functioning of the economic system." Appraisal of these conclusions may well be left to the readers of this journal, to whom a full reading of this chapter is recommended.

PERSONS interested in the general problem of the role of government in economic life will turn quckly to the final chapter of each volume. In Volume I, this chapter views the course of public policy as it relates to private enterprise generally from the standpoint of changes in objectives, methods, and criteria.

Under objectives are found: (1) a shift from reliance upon freedom of economic opportunity and "healthy rivalry" as guarantors of economic security to devices designed "to regulate the general pace of general business activity and to assure a minimum income to those who cannot provide it for themselves," and (2) "the extension of the principle of preserving the competitive position of particular industries or groups."

Under changes in methods are found: (1) "the development of governmental prescriptions concerning the management policies of private business," (2) "the considerable expansion of direct production by government," and (3) "governmental sponsorship of the organization of special interest groups, and the encouragement of partisan group participation in governmental functions."

Under changes in criteria are found: (1) "a diminished confidence in private enterprise as a social instrumentality for the organization of economic life," and (2) a "tendency to identify the special interests of particular groups or industries with the national welfare."

THE FINAL chapter of Volume II discusses changes with respect to objectives, methods, and devices, this time with reference to special governmental treatment of private enterprise and direct governmental production of goods and services.

There are also brief summaries of current issues in the special areas. Finally, there are a number of general observations, a few of which seem to the reviewer worth quoting as they give some indication of the implicit position of the work as a whole.

Three quotations are selected: (1) "No aspect of the great elaboration of governmental functions during the past decade . . . is more significant than the tendency to consider limited parts of the economic system without adequate consideration of their interrelationship with other parts, and the inclination to appraise limited phases of public policy without a proper understanding of their bearing on other phases.” (2) “It has by no means been demonstrated by economic analysis, much less by practice, that the means now in operation for meeting the fundamental and serious problem of unemployment, or the more extreme measures which have been proposed, will do more to meet the situation than the less elaborate programs of the early thirties.” (3) “As the range of public control is extended, the factors which need to be taken into consideration in framing and in administering policy become so numerous and so complex that they may outgrow the capacity of individuals to comprehend them”.

WITH THESE statements, the reviewer cannot fully concur. In his opinion, there has been in the last decade an increased appreciation of the impact of public action on the economy as a whole by Government administrators and economists, and an increased competence to deal with national problems of production and employment. It is, of course, true that the limitations of human capacity circumscribe the task of the public servant, but they likewise hamper the general economist in his never-ending task of attempting to reduce the complex of the Government and economic life to an understandable scheme.

These volumes are difficult to appraise. They cover a great number of complex subjects; a large number of collaborators were involved; and the whole project was carried out under the pressure of a time schedule. The final product is somewhat more of a textbook than the reviewer had anticipated, but it should nevertheless be on the shelves of those who wish to keep abreast of public policy. Finally, the reviewer believes the decision to eschew considerations of “soundness” was unwise, as their presence would have given more point to the whole undertaking and certainly would have been welcomed by all who are concerned with the future of our economic society.

√ *For your attention*

ECONOMIC NATIONALISM, TRADE BARRIERS AND THE WAR. 110 pp. Academy of Political Science. Volume XIX, No. 1. New York. 1940.

Under the clouds of the war, Government experts, university professors and representatives of industry and labor came together at the semiannual meeting of the Academy of Political Science in New York City on April 11, 1940, to appraise recent attempts to break through the barriers of economic nationalism. The European war placed an extraordinary restraint upon their predictions concerning the future of international trade. All agreed that much depends on the outcome of the present conflict. Differences cropped up as to how far our national commercial policy may deviate from protectionist principles in a “mercantilist, nationalist, bellicose world.”

POPULATION TRENDS AND ADJUSTMENTS IN ARKANSAS. Wm. H. Metzler. 59 pp. University of Arkansas Agricultural Experiment Station. Fayetteville, Ark. 1940.

Arkansas, predominantly rural and agricultural, has population problems in both types of regions.

The writer finds that birth rates in the rural districts are high in relation to the ability of the area to support population and that unless there is heavy migration out of these high-birth-rate counties, standards of living in those places will be cut in half within the next 50 years. A reliable public agency to which people could go for guidance about migration is a felt need.

The disparity between high nonfarm incomes and low farm incomes is termed pathological. "This disparity is so great that, if continued, it will tend to produce a situation of gradual impoverishment on one hand and of accumulation on the other. Impoverishment of the agricultural population, however, must inevitably limit the prosperity of the urban population as well."

A RURAL SCHOOL AREA IN CENTRAL SOUTH CAROLINA. Henry L. Fulmer. 44 pp. South Carolina Agricultural Experiment Station. Clemson, S. C. Bulletin 325. 1940.

Mr. Fulmer examines the educational progress of the youth and the economic and sociological conditions of the families in 15 rural school districts of Lexington County, S. C. He finds that the elementary schools are top heavy with lay management and are in need of educational leadership, that the rural elementary schools are not receiving the benefits of library service, recreational services, health education, or the proper instruction in food and diet problems, and that the rural school districts are in need of county, State, and Federal aid for building, equipment, and transportation cost.

OUR NATIONAL RESOURCES. National Resources Planning Board. 45 pp. Washington, D. C. 1940.

From its technical reports, from studies of other Government agencies and from other authoritative sources, the National Resources Planning Board has developed this pamphlet. The Board has recorded statements of the facts about our resources—population, transportation, land, health, education, public works—and their problems. Though brief, the presentation contains the signficant figures and problems of America's assets, both material and institutional. The National Resources Planning Board is an advisory agency responsible for planning the conservation and wise use of our resources.

URBAN LAND APPRAISAL. National Association of Assessing Officers. 170 pp. Chicago. 1940.

The assessor confronted with the problem of adopting a system of urban land valuation will find this book a practical guide. Analysis is made of the principles underlying the rules and procedures now employed in compiling land value data. Thus the thousands of assessment districts now assessed with little or no method at all can benefit from the methods used by large metropolitan areas.

NATIONAL RESOURCES FOR FUTURE AMERICANS. Charles W. Eliot, Director, National Resources Planning Board. Address before the Progressive Education Association, Chicago, Illinois. 14 pp. 1940.

School is no longer a place where boys and girls merely learn the three R's. It is rapidly becoming the spot where children are being prepared for living. Educators, then, especially progressive educators, will need to bring to the attention of their young students the problems most likely to be met. One of the greatest of these, says Mr. Eliot, will be the task of future citizens to make the best use of America's human and natural resources. An aging population, high illness and accident rates, exploited forests and soils, farm tenancy, farmers with heavy mortgages and debts, exhausted mineral and fuel resources, have created problems which the next generation must face. It is this new kind of geography which Mr. Eliot would teach young Americans if our human resources are to be combined with our natural resources to promote a higher standard of living.

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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ECONOMICS

Editorial Notes *and* EXPRESSIONS

A few words can epitomize the Southern Great Plains, complex as it is—wheat, oil, grass; wind, dust, drought; prairies, dunes, mesas; distance, sunshine, heat, and, in these later days, dust storms, migrants, diversification, rehabilitation.

This issue of Land Policy Review is devoted entirely to those words and the conditions and problems they connote. No attempt was made to make the picture of the Southern Great Plains complete. There are not enough pages for that. But it so happens that this collection of articles considers in one way or another all the major problems of the area.

The contributors: Edwin R. Henson is the Coordinator for the Southern Great Plains. Lionel C. Holm directs the FSA rural rehabilitation program in Colorado, Kansas, and Oklahoma. Fred J. Sykes is chief of the division of agronomy and range conservation of the Southern Great Plains region, Soil Conservation Service. Earl H. Bell recently became leader of the division of farm population and rural welfare, BAE, in Amarillo, Texas. He has made a special study of Haskell County, Kansas.

H. H. Finnell is Conservator for the Southern Great Plains region. Glenn Grisham is the manager of the El Pueblo project. Norman G. Fuller manages a land use project at Springfield, Colorado. Lewis T. Nordyke is a staff writer on the Amarillo Globe-News. He contributes frequently to magazines and is recognized as an authority on Southern Great Plains history. Elsie Marcley is Mr. Henson's secretary.

P. V. Cardon is assistant chief of the Bureau of Plant Industry. W. G. McGinnies is an ecologist at the Southwestern Forest and Range Experiment Station, Tucson, Arizona. O. S. Aamodt is principal agronomist in charge, division of forage crops and diseases, Bureau of Plant Industry. Sydney H. Watson heads the revegetation program of SCS at Amarillo, Texas.

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Borrowed Time in THE DUST BOWL

By Edwin R. Henson. *The Coordinator for the Southern Great Plains outlines the drought-made problems of his region and the attempts to solve them. He cites reasons for optimism and, most important of all, he points out the paramount lesson of the drought years: We must not forget.*

The Dust Bowl, they say, is coming back: The intense, heart-breaking dust storms are less severe; revegetation is progressing, and grass once more is getting a hold on the loose soil; farmers have more money and more hope and more knowledge that they cannot survive by wheat alone.

Yes, the Dust Bowl is coming back, but the fact alone means little. It will take years for complete recovery. Nature needed centuries to clothe the soil. In a few crop seasons man destroyed that cover by plowing. And now years more are required, even with the best help of agronomy, botany, and ecology, to bring the denuded acres to their best permanent use. Furthermore, it is largely public money that has sustained the owners and operators in their travail, and it is Government-sponsored projects that have led the way to progress. We cannot say that the Dust Bowl has regained completely its economic health until its own people can stand alone and work alone.

And the Dust Bowl will not have recuperated until we can say, with assurance and certainty, that we have learned the lesson of the great plow-up, that we understand the uses and limitations of this fertile but dry empire in parts of five States, and that we will not forget.

We must not forget that there will be temptations again in the cycles of humid years to plow it up once more for grain; that diversification is important here, as elsewhere; that man cannot fight nature in this area of marginal values; that "man strides over the land, and deserts follow in his footsteps."

Our first mistake was made under homestead laws, by which Great Plains land was parceled into units too small to sustain families. A second mistake was to break down grazing units into grain farms, so that soil was left prey to wind and, through drought, to blowing. Both developments were checked only by the exodus of farmers, driven out by tractors and increasingly severe dust storms and drought in the 1930's.

What we have done can be called a major accomplishment. I review it here to indicate the enormity of the task engendered by a few years of thoughtlessness and to emphasize that what we have done is not enough—that we must make sure that we will not forget.

Many counties lost more than half their farm population. The acres abandoned by these refugees from dust immediately became a major problem. Untended, unstirred, and drought-denuded land blew across neighboring farms and covered crops, wind-checking devices, roads, and homes. Good farms under good management were leveled into barren wastes by drifting sand.

So acute was the situation that the first Southern Plains (or Dust Bowl) Committee was created to study the situation and to recommend action to relieve the growing destitution and despair and to take immediate steps to make usable a portion of the blowing soils and the occupied homes.

Listing, and the First Emergency Program

The immediate need was for a mechanical device to check temporarily the blowing of the soil; the simple remedy was to plow the ground crossways of the prevailing wind. The Committee then started an emergency program; Congress authorized the use of $2,000,000 in the parts of Texas, Kansas, Colorado, New Mexico, and Oklahoma that came to be known as the Dust Bowl. Farmers were paid for listing their own lands and nearby abandoned lands.

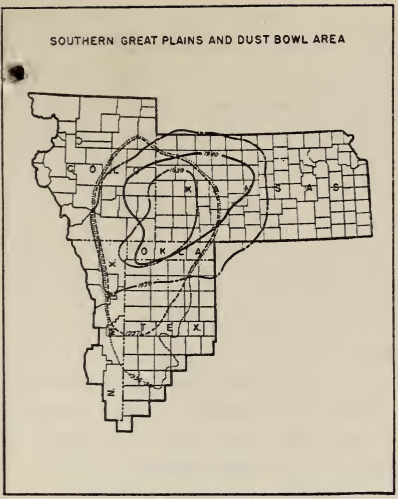
In some places so much land had been abandoned that it could not all be covered with vegetation, and severe dust storms were still occurring.

From that beginning, farmers generally recognized the desirability of having all uncovered lands listed to check wind erosion. The emergency funds for this purpose have been exhausted, but listing has been encouraged through other programs. Now, neighbors expect farmers to list exposed blow-land.

Another lesson was that a growing crop of sorghum, broomcorn or even weeds can be valuable as a natural cover.

Considerable progress has been made throughout the area in controlling wind erosion. Technicians have standardized land treatments that minimize the likelihood of severe dust storms; the Agricultural Adjustment Administration has progressed continuously until eligibility for AAA payments now requires the control of wind erosion and practically all the practices paid for contribute toward the checking of erosion.

Requirements for Farm Security Administration loans likewise include provisions for controlling wind erosion, for carrying out conservation measures, and for having proper moisture relations before seeding a crop. The Soil Conservation Service


SOUTHERN GREAT PLAINS AND DUST BOWL AREA

has developed plans for contour furrowing on pastures, contour planting of crops, and a system of small terraces close together so that the water must go into the ground uniformly over a field.

Experiment stations and SCS technicians have experimented with the revegetation of lands that were plowed but that should have remained in grass. The AAA designated a special classification of restoration land to encourage the planting of grass. This problem of revegetating lands once plowed ill-advisedly for wheat has challenged the ingenuity of all our research people, but only partial solutions have been found. The difficulty of putting land to its proper use by revegetation, plus the problem of handling abandoned and tax-delinquent land, magnifies the importance of land management in this area.

Half the land in most of the counties is tax delinquent. Most of such land belongs to residents; absentee owners normally keep their taxes paid. Schools were disrupted when people left the land; roads, too extensive for the present population, need reorganization. Counties without taxable oil, railroad or similar property meet their budgets with extreme difficulty.

Under these circumstances farmers and agricultural workers hope to reestablish a permanent agriculture through sound planning and the cooperation of all agencies.

People living in this area are beginning to realize that even though they have made what seem severe and radical adjustments they must make even more radical adjustments to solve the pressing problems still confronting them.

The Place of Federal Help

Leading farmers as well as most departmental and State workers know that farmers here have been dependent upon the Federal Government. Through the years of drought the money these farmers had to spend came from their wheat allotments. Almost always these AAA payments were supplemented by Farm Security loans or grants, feed and seed loans, and considerable direct relief.

With the establishment of these several means of Federal help, people in communities here and there began to think and plan seriously for the future at home—not somewhere else. At first many were content to let things rock along holding on by their finger tips through the assistance given by the agricultural program, and praying for a good crop year. But even then many were convinced that some basic adjustments in land use would have to be made before there could be a stable agriculture in this area.

This realization among the people was the most hopeful sign then, and is the most hopeful sign for the future.

In Sherman County, Tex., for example, absentee ownership and even absentee farming were prevalent. Resident tenant- and owner-operators found their efforts to control wind erosion on their own lands less and less effective as adjacent lands were abandoned and not controlled. This group proposed to the Agricultural Adjustment Administration that the AAA program be operated on a new basis in Sherman County.

They asked that the wheat allotment money that would come to the county for the individual farms be pooled and that individual farmers be required to earn any AAA payment they received by carrying out wind-erosion control practices on their lands. These included listing, leaving cover on the land, strip cropping, planting borders of sorghums around the field, and similar operations that tended to check the destruction of crops by blowing sand and thus make the community more habitable. They received the right to try this method, and the proposal was adopted by practically unanimous farmer vote. After the first year, the plan was so effective in controlling wind erosion that the county voted 100 percent to continue it.

In Greeley County, Colo., farmers were almost desperate and afraid that they would have to abandon their homes. There seemed little chance that the general programs in that county would improve conditions so that the operation of farms would become profitable again.

They got together and decided that concerted action was needed and that all farmers must control their land in order to save their homes. They adopted the practice of strip cropping sorghums or sudan grass and voted on themselves a requirement that every field on every farm must be alternately stripped with a row crop that would check the wind and stop the blowing of sand. They still could grow some wheat between the strips. Farmers were encouraged to bring under this program abandoned lands adjoining theirs. This strip-cropping made Greeley County a real picture during the growing season and was largely successful in preventing wind erosion.

Since the inception of the first experimental program in Sherman County, similar programs are in force in 7 Texas counties. The Greeley County plan was followed in 10 Kansas counties last year. It is thought that 54 counties in all will be following a true conservation program for 1941. With slight modifications, the programs have been blended into a type under which AAA pays farmers for carrying out conservation work and reduces their wheat acreage but not the amount of their payment.

Departmental and State workers and leading farmers now contemplate the gradual expansion of such programs to cover the entire Dust Bowl and perhaps other areas. In each of these counties, wind erosion control is militantly demanded of the farmers by their neighbors, so that in many places when a man's farm starts to blow and he does not immediately begin listing, local land use planning committees call upon him and request that he list his land.

In other sections farmers have banded together into a soil conservation district and within this district are bending every effort to control wind erosion and to reorganize farms and the land management program in such a way that schools, roads, and farm units are adjusted to the needs of the people.

In a single year one soil conservation district has leased as much as 39,000 acres of land in order to bring it into compliance with the AAA program and to control wind erosion.

In another area county commissioners, finding themselves short of tax income, with approximately 250,000 acres of their county land tax delinquent for more than 5 years, began to study means of correcting this condition. The land is being used, even though it is tax delinquent, usually by cattlemen who allow their stock to trespass without paying rent or tax.

Such a large amount of land was tax delinquent that the Farm Security Administration was finding it difficult to locate suitable units on which to establish farm families with a reasonable assurance that they could repay their loans. After studying this problem, FSA and county commissioners worked out an agreement, whereby FSA would block up enough of these tax delinquent lands to make a minimum unit of suitable size for efficient operation. The FSA would agree to finance the farmer who needed to be relocated and equip him for operating this unit if, in return, the county commissioners would agree to take title to the tax delinquent land and then sublease it to the borrower for at least 10 years. The commissioners likewise agreed that the rent on this land should be determined by a range survey and that they receive compensation in accordance with the actual use value of the land.

The farm units set up under this cooperative plan are the same as the reorganized units set up in the soil conservation district. It is believed they offer a permanent, long-time solution of problems of proper land use in this area.

Public Programs and Borrowed Time

The effectiveness of these programs is apparent to those acquainted with the Dust Bowl before and after it became a problem area.

But until we are out of the emergency stage we are living and working on borrowed time in the Dust Bowl.

An historical perspective that recognizes the best uses of the land—in the light of Nature's way, the emergency way, and the soil technician's way—is part of the permanent solution.

Another part is the development of a public opinion and sound knowledge of marginal problems so strong and so wide that they are proof against temptations, public or private, to plow up again the marginal lands in times of normal rainfall or under duress of greater grain production or when nonagriculturalists of this or that county believe that greater prosperity will come in plowing up marginal land than in following the patterns made by nature or formulated by careful, sound agronomists.

In other words, we must insure ourselves against too great optimism that would push us this way or that, against our more sober judgment and that of the men who have studied the Dust Bowl and know its uses and limitations.

What Is Happening TO "FARMS TAILORED TO FIT"

By LIONEL C. HOLM. In Land Policy Review for May-June, 1939, Roy I. Kimmel told about efforts to help farmers in the Southern Great Plains by reorganizing their holdings and methods. This progress report tells about loans to 400 farmers, their financial condition, increased stability through diversification, and outstanding problems of taxes and leases.

Unit reorganization is an attempt to promote sound land use and establish a stable agricultural economy by assisting the individual operator to shift from a cash crop system of farming to a diversified livestock and feed crop system.

The Farm Security Administration advances the necessary funds to establish a unit, to cover operating expenses, and to purchase a foundation herd of breeding livestock on a repayment period up to 10 years. The Soil Conservation Service furnishes technical assistance in preparing a plan of conservation operations on the unit which is designed to stabilize the blow land, put into practice conservation operations, and promote good range management. The supervision and servicing of the loan are the responsibility of the FSA.

Since the inauguration of the program early in 1938 until June 30, 1940, approximately 400 loans of this nature have been made in Colorado, New Mexico, Texas, Oklahoma, and Kansas; more than 250 of them in 14 southeast Colorado counties. A survey of 71 representative units as of December 31, 1939, was made to get a fair indication of the operators' progress under this type of organization. Some of the units had been in operation for 2 years and some for only 1 year, but no case was considered that had not been in a position to produce at least one calf or lamb crop.

The consideration of any program in terms of averages is not a true index of an individual's progress; nevertheless, in this instance it is probably the best way to determine what has been accomplished. The average individual as here considered represents the average of the results obtained in the survey.

This average individual, before receiving a Unit Reorganization loan, was farming approximately 1,200 acres, with some 820 acres in grass and about 380 acres in cultivation. His reorganized unit consists of 2,050 acres, with 1,620 acres in grass and 430 acres in cultivation. Previously, he had 13 head of cattle, of which only 8 were cows or 2-year-old heifers.

Upon receiving his loan, he purchased additional cattle, so that he had 19 head of producing cows and heifers. By January 1, 1940, his herd had increased to 40, of which 26 head were cows and 2-year-old heifers; the rest were steer calves, heifer calves, and yearling heifers being retained to increase the breeding herd.

Increasing Net Worth

The net worth of this average client when he obtained the loan was $428. He owed the FSA $687; he owed other creditors $1,507. As of January 1, 1940, his indebtedness to the Farm Security Administration, (including supplemental loans after his initial loan, less repayments he had made during that period) was $1,771. The other obligations had been decreased to $1,114. A comparison of his total obligations at the time he obtained his Unit Reorganization loan and as of January 1, 1940, shows that they have been increased from $2,195 to $2,886, an increase of $691. During that period his net worth increased from $428 to $1,134, a gain of $706. During the time that he has operated under the Unit Reorganization plan, he has received $336 in supplemental loans and has repaid $560, but it has been necessary to provide him with $90 worth of grants.

Financially, this typical client has not made startling progress, because his increase in net worth is offset by an almost equal increase in indebtedness, and the amount of his repayment is only $134 more than the amount it has been necessary to advance in the form of supplemental loans and subsistence grants.

He has been able, however, to retire debts of $393 to outside creditors. This is about what was anticipated, as the first repayments were expected to be low so that the borrower could build up the carrying capacity of his range, increase his cow herd, and stabilize the land that was to be restored to grass.

A further analysis should be made to determine whether this average client's earning capacity has been increased and whether from now on he can better himself financially.

It has been noted that the productive units in his herd have increased from 19 to 26. The carrying capacity of his range has increased from 149 to 184. He has 23 tons of stacked feed on hand as of January 1, 1940, besides 412 acres of grass reserve that has not been pastured during the growing season. His farm program has been altered so that instead of devoting 69 acres to feed crop he is now devoting 112 acres. The amount of supplemental pasture has been increased from 5 acres to 20, and the acreage of hay, both tame and native, increased from 6 to 15; 172 acres of restoration land are included in this program of which 140 acres already have been stabilized.

He has contour-furrowed 170 acres of pasture and he contemplates contouring considerable acreage over a period of years. The total cost of his leased land for 1939 was $180. The grazing cost was $3.40 per cow. With increased carrying capacity and a growing herd this cost per head will be lowered over the next few years. In 1938 he had a calf crop of 82.5 percent which was increased in 1939 to 84.7 percent. With younger cows and better bulls, together with improved range and sufficient supplemental feed, he should be able to increase further this percentage.

All these factors point to a brighter future with increased earning capacity. This is borne out by the fact that his actual income for the year in which he received his loan was $900, while for the year ending January 1, 1940, he had an income of $1,667.

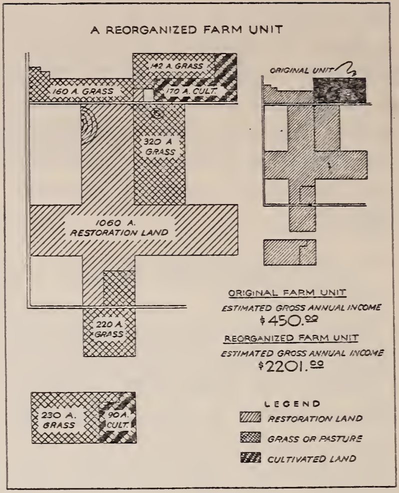
Several other facts, brought out in the survey, can be presented better on a basis of total, rather than average, figures.

The total amount of repayments from these 71 cases has been $39,769, including $30,623 from the sale of livestock, $7,063 from Agricultural Conservation Program payments, and the balance from a number of sources. The total repayment from crops in these 71 cases is only $664—quite indicative of the reorganization accomplished in shifting from a cash crop economy to a livestock and feed program.

In all, 12,255 acres of land have been placed under the Restoration Program; 11,988 acres have been contour-furrowed; 110 stock ponds constructed, and 141 wells developed for stock water. If these 71 cases are representative of the 400 loans, one could assume that 68,800 acres have been placed under the Restoration Program, of which 56,000 have already been stabilized and the first step taken toward the reestablishment of the grass cover.

The AAA Program

The total AAA payments collected by the 71 borrowers in 1939 amounted to $19,834; $7,000 of this was applied on FSA loans and the remainder went into operating expenses. The Agricultural Adjustment Administration should be given considerable credit for the progress of these units. The earning capacity of the units during the first few years is necessarily low, and the AAA payments are essential in tiding them over this crucial period.



On the other hand, it may be pointed out that in some areas the AAA program has tended to retard the expansion of the Unit Reorganization program. This results from the emphasis placed by the AAA program on special crops, such as wheat. It is hoped that the new special program sponsored by the AAA and adopted by several counties in Texas and Kansas during the past year, whereby any special emphasis on specific crops is removed and the entire emphasis of the program placed on conservation practices, will meet with public favor and be adopted over a much wider area. This type of AAA program will aid in the expansion of the Unit Reorganization program.

The development of the Unit Reorganization program has been relatively slow. There are several reasons for this.

It has been interesting to note the attitude of the land owners and operators in attempting to develop this program. Many land owners in this area are nonresident and have very little knowledge of the actual condition of their own holdings. In some instances, it has been found that the owner had the impression that he owned a tract of grass land, while actually his land had been broken and farmed to wheat some years ago and had become a blow hazard.

Few of these absentee owners had been getting any income from this land for a number of years. It would seem that, having received no income for years, they would have everything to gain and nothing to lose by entering into a long-term lease contract that would give a definite cash return. This has not been the case. The average owner seems to believe that some day his investment will develop into the bonanza for which he had hoped when he made it. Therefore, on first contact, he has been reluctant to enter into a long-term lease in line with the actual earning capacity of the land.

In most cases where personal contact could be made with the landlord or adequate explanation made through correspondence of the aims of the program, of conservation practices that would be put into operation, and the supervision that would be given the operations of the borrower by the Farm Security Administration, satisfactory leases have been obtained. This, however, is a slow process, as the rounding out of a unit usually necessitates the leasing of land from 8 to 10 owners.

Policies

Policies in a democracy should grow out of the soil of intelligent and informed public opinion. —M. L. Wilson

Security of Tenure

The attitude of borrowers also has varied. Many of them could readily see the advantages of operating under a lease, but there were others who could not. They had the opinion that if they could obtain security of tenure on a small tract of land to use as an operating base, they did not need to spend cash for leases on the surrounding land. In some instances, they had been using some of this land for grazing for several years without any cash cost, and therefore saw no reason why they could not continue to do this if the Farm Security Administration would merely lend them enough money to expand their operations.

It was evident that the future success of the Unit Reorganization program depended upon equitable tenure arrangements for both the tenant and the land owner. Conservation practices and good range management could not be fostered by any arrangement which would not fix upon the individual operator the responsibility for obtaining maximum results from a given tract over a 10-year period. It was felt necessary definitely to block out the unit through leases in order to prevent encroachment by other operators and overgrazing by itinerant herds of cattle and sheep which drift from area to area where local grazing conditions are good and unfenced land is available. The land owner also had to be assured of a fair return from his land if he was expected to be a partner to a permanent organization.

Taxes have been a vital factor in developing these units. If the carrying capacity of the unit as a whole permits the operator to pay a cash lease equal to or greater than the taxes on the land, a lease can usually be obtained. In many areas, however, the tax assessment exceeds the earning capacity of the land, and difficulty is immediately experienced in attempting to lease such lands, although the owner may not have had any return from this land for many years.

A discrepancy in taxes is particularly obvious between Colorado and Kansas. Grazing land of like carrying capacity will have a tax assessment in Colorado of from 4 to 10 cents an acre, while similar land across the line in Kansas will vary from 8 to 15 cents an acre. The tax structure has a profound bearing on the reorganization of an agricultural economy.

Inability to graze taxes out of the land contributed to the breaking of large areas of land unsuitable for cultivation. Without an adjustment in taxes, it will be difficult to justify the retirement of these same lands from cultivation. The land owner will elect to keep it in cultivation in the vain hope that sufficient income will be realized from crops to enable him to meet his overhead charges.

Considerable work has been done in Colorado to readjust the tax base in line with the earning capacity of land, and still more needs to be done.

This problem is now being considered by State and county land use planning committees in Kansas, and it is hoped that something constructive will come out of their considerations of this problem, which will assist in the establishment of a stable agricultural economy in portions of western Kansas.

The nature of the Unit Reorganization program is such that security of tenure is absolutely essential. At the outset, it was believed that this security could be gained only through leases on the essential parts of the operating unit for at least 10 years. It soon became apparent that few land owners were willing to sign a lease for such a period. Requirements were relaxed so that units were set up with 5-year leases, and on portions of the holdings that were not considered absolutely essential leases were accepted for 3 years.

Many owners apparently were holding their land not as a permanent investment but were wanting to sell it whenever they would be able to get their money out of it. Therefore they insisted on having a subject-to-sale clause in the lease. Such clauses are dangerous to the future of the Unit Reorganization set-ups.

The number of cases where units have been wrecked by this provision to date is not large; the alarming aspect is that not only private owners but governmental agencies, too, with holdings in this area, appear eager and willing to use the sales clause in their leases.

Portions of units have been sold without much apparent consideration for either the effect upon the individual unit or the long-time use of the land. In several instances a client has leased tracts of land that were in a bad blow condition. With considerable effort and expense the client succeeded in fencing and in stabilizing this land, only to have the owner sell the tract, even though it may have been an essential part of the unit.

The Federal land bank has never agreed to give more than a 5-year lease, subject to sale, on any of its holdings. The bank has sold several tracts and thereby wrecked a well-organized unit for an operator who could make sound use of this land.

It is doubtful whether much of this land has been sold in such a manner that it will stay sold. Certainly it is not fair to the individual operator to be deprived of the use of this land just when he is in position to reap some of the benefits of his labor in restoring the land to a salable condition. Considerable educational work needs to be done with private land owners in this connection, and closer coordination of land use policies between various governmental agencies is definitely needed.

It is realized that during the relatively short time in which the Unit Reorganization program has been in operation comparatively high livestock prices have prevailed. The true test of whether or not this program will provide a stable agricultural economy for the Southern Great Plains will come when it faces both drought and low livestock prices. Considering the feed reserves being built up and the flexibility of repayments permissible under the financing arrangements, it seems reasonable to hope that the Unit Reorganization program can successfully hurdle both these hazards.

The land may bloom again if man once more makes his peace with Nature. Careful planting will give him back the foothill trees; terracing will save lush foothill farms; a wise use of the land will restore grass for controlled grazing; fewer and larger farms on scientifically selected sites may yield under the plough a comfortable living; dams will hold back the waters from rains and melting snow, giving power and controlling the flow of the life-giving streams; springs may be developed, water pumped by windmills to water cattle, moisture held in the soil by scientific methods of tillage; by such means the life of man on the land may be made happier, more prosperous, more secure. The sun, the wind, the rain, the snow can be friends of man, not enemies. This is no Utopian dream. It is a promise, to be realized if we will.

—THE FUTURE OF THE GREAT PLAINS

How to Tie DOWN A SAND DUNE

By FRED J. SYKES. Out at Caddoa, Colo., Army engineers are starting to build a $14,000,000 dam and reservoir, 14 miles long, to irrigate a large area in western Kansas and eastern Colorado, to control floods, and to regulate run-off of the Arkansas River. The project was conceived two decades ago and involves many interesting points, one of the most striking of which is here discussed—the stabilization, in a hurry, of troublesome dunes.

A primary lesson in soil stabilization, on a basis resembling a laboratory experiment, is being given in eastern Colorado, where farmers used to look up the Arkansas River for flash floods to water their crops and where now they look to the John Martin dam and reservoir project as insurance against drought and crop uncertainties.

The problem was this: Several miles of the Santa Fe Railroad's main line within the reservoir area had to be moved before the dam could be started. One possibility was to relocate the tracks through a valuable irrigated section of the valley, across the river. That would mean the building of drainage structures and two bridges, besides outlays for expensive land.

The other possibility—the one that finally was chosen—was a 20-mile-long right-of-way south of the original location and through structureless, sandy, dry grazing land, where active sand dunes range in size from one-half acre to 100 acres and from 5 to 20 feet in height. The estimated saving of this route over the other is $2,500,000.

The Corps of Engineers, United States Army, supervisors of the project, presented the cost estimates of the two sites to railroad officials, who tentatively accepted the right-of-way through the dunes, with the important provision that the area had to be stabilized sufficiently to insure safe, efficient operation of their fast trains over the road.

Here was a job, a difficult undertaking in an area where the average annual rainfall is only 11.78 inches, and wind velocities are always rather high. The Corps of Engineers consulted the Department of Agriculture and a field agreement was signed whereby the Soil Conservation Service furnished the Corps technical assistance in making a work plan.

To gain information on sand dune stabilization under the climatic and physical conditions of the area a representative dune of about 125 acres was selected for tests to determine the effectiveness of the recommendations and to try certain other methods of stabilization not incorporated in the work plan.

The only evidence of plant growth on the demonstration dune when operations were started, June 16, 1939, was a few scattered plants of yucca, sage brush, and salt grass. The sand had blown from around the yucca and sage brush plants in some cases as much as 4 and 5 feet, leaving the abrupt mounds of original soil scattered over the area. In many places the sand piled up to 10 and 20 feet, with rather abrupt crests on the leeward side of the dune.

To get the land in condition for the operation of seeding equipment, the large yucca and sage plants were pushed over with a tractor bulldozer and removed. The crests were leveled with the bulldozer, and the excess sand pushed into the blow-out areas. The dunes were leveled as nearly as possible to conform to the characteristic underlying topography.

Afterwards, the area was seeded in alternate strips to several varieties of sorghums to determine which kind could best resist wind action and sand movement. Excellent stands of all sorghums were obtained, but none was able to withstand the strong winds and the blasting effect of the sweeping sand. Some plants were covered with sand to a depth of several inches; others were blown completely out of the ground.

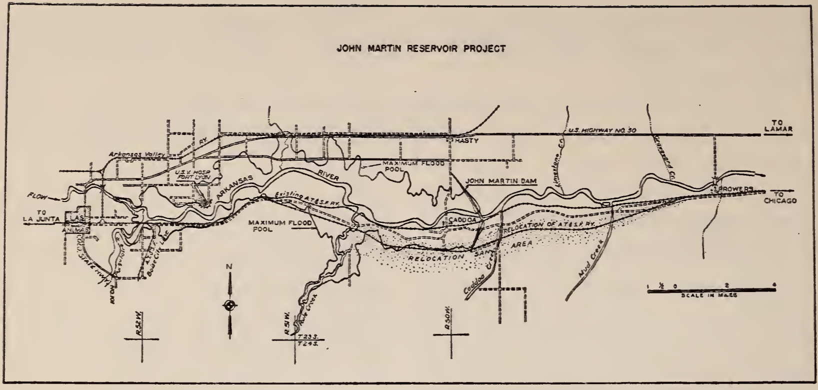
Seeding operations were repeated on different parts of the area with different types of equipment, such as grain drills, disk furrow openers, listers, and shovel-type drills. These methods were no more successful than those used for the first seedings.

With something like desperation, workers tried mulching, a practice with which gardeners on a small scale have long been familiar. Seeding was repeated on a small plot with the shovel-type lister drill, and a light covering of wheat straw mulch applied immediately after seeding. Here was the first success. The mulch prevented sand movement, reduced evaporation and the temperature of the surface soil, and allowed the seedlings to become established. The crop grew to sufficient height to produce an effective cover against wind erosion.

Success—With Mulching

The favorable results seemed conclusive that mulch would at least increase the possibilities of establishing vegetation, whether it be of temporary or permanent type. In order to observe further the effects of mulching and the possibilities of using winter grains as cover crops, with and without mulch, fall rye was seeded with a regular grain drill on approximately 70 acres. Half of this area was mulched with straw, at the rate of 6 tons to the acre. The other half was not mulched. The mulched portion survived throughout the winter and spring, and the rye produced a satisfactory cover crop. The unmulched portion of the area blew out and was completely destroyed soon after the plants emerged from the soil.

This experience showed that it was useless to attempt to grow cover crops, like grain sorghums or small grains, without first protecting it with some type of mulch. As wheat and barley straw was the most available and cheapest type of mulch, contracts were made with local farmers



for delivery of straw by truck to the site. Men with pitchforks spread the straw evenly over the area to a depth of approximately 3 inches. To prevent the movement of the mulch by wind, a heavily weighted V-type wheel land-packer was run over the straw to tuck it into the sand.

Since straw afforded the same protection from wind erosion that had been hoped for from the planting of annual cover crops, it was determined to plant native grasses and perennial shrubs at the time of mulching. Thus, a large amount of moisture was conserved for the establishment of permanent grasses and shrubs, which would otherwise be used by the cover crops. Grasses seeded in the fall of 1939, however, did not germinate until spring moisture was received, at which time the emergence of seedlings was satisfactory. Survival has been good so far.

The Corps of Engineers acquired title to about 5,200 acres adjacent to the railroad relocation and considered necessary for adequate protection and safe operation of fast trains. Of this acreage approximately 500 acres were in open, active, blowing dunes. Another 300 acres along the center line of the relocated tracks will be disturbed by road-bed construction, and will be in a blowing condition when the construction is completed in a few months. The rest of the area has a sparse covering of sage brush and weeds. All native grasses that once grew in the district were destroyed by drought and over-grazing during the past 4 or 5 years. Much of this latter area is potential blow sand territory.

It was determined that it would be desirable to plant this area to native grasses to obtain a more effective permanent stabilization to the area. To observe the results of fall grass seedings in the native cover of sage, 35 acres were seeded to grass in October 1939, with a double coulter disk-type drill. A mixture of grass seed that would be desirable for future seedings, consisting of Canada wild rye, Virginia wild rye, sand reed grass, blue grama, side-oats grama, blow-out grass, and sand dropseed, was used. The seed did not germinate, however, during the fall because of the lack of surface moisture, but with moisture during the winter months, emergence of seedlings in the early spring was satisfactory.

To observe the effectiveness of trees and shrubs in establishing permanent vegetation, 29,200 cottonwoods and tamarix seedlings were planted on a mulched portion of the demonstration in March and April. Although it would not be economically feasible to plant the entire acreage to trees, there may be some critical areas where trees would be most effective and would offset the cost by their efficiency.

Operations were started outside the demonstration area in October 1939, and so far 450 acres have been mulched and seeded to native grass seed mixture.

It was estimated that the cost of stabilization by these methods will be approximately $80 an acre. The entire cost to the Army engineers for putting the 5,200 acres in a safe condition will be approximately $150,000 for the complete job.

$80 An Acre for 50-cent Land

This cost, no doubt, could have been materially reduced had not the time factor been important; as only two growing seasons were available for the establishment of permanent stabilization before this relocated track would be put into use, it was deemed advisable to resort to artificial methods rather than to depend upon Nature to establish the vegetative protection.

It looks like folly to spend $80 an acre on land that normally sells from 50 cents to $2.50 an acre, but in this case it was a matter of saving the cost of constructing the bridges, the purchase of a right-of-way through irrigated land, and the responsibility of making settlements over water rights and relocation of irrigation systems, which would be affected by such construction.

The information obtained from this project will be of practical value to farmers, not from the standpoint of going into the extensive stabilization of sand dunes, but of taking care of the small dunes that develop in dry, sandy range land. Small critical areas may be treated as they have been treated in the John Martin project; thus they can be prevented from growing into large, dangerous areas that the average ranchman cannot afford to fight.

Blame

There is no evidence that in historic times there was ever a severe enough drought to destroy the grass roots and cause wind erosion comparable with that which took place in 1934 and 1936; that phenomenon is chargeable to the plowing and overcropping of comparatively recent years.

—The Future of the Great Plains

ABOUT THE PEOPLE

By Earl H. Bell

FOR 50 YEARS the population of the Southern Great Plains has fluctuated widely in reaction to rainfall and economic factors like prices.

For example, of the farmers in Haskell County, Kans., in 1895, 57 percent had left by 1905. Of those there in 1905, 53.8 percent had left by 1915. Of those there in 1925, 27.5 percent had migrated by 1930.

Behind the statistics are the blasted hopes and ambitions of thousands who invested their savings, toiled for a few years, depleted their resources, and left, only to be followed by others, enticed by promotional methods and temporarily favorable moisture conditions. Haskell County is in the Dust Bowl. Its soil is better than the average.

From 1900 to 1930, rapidly expanding industry absorbed the surplus farm population. Some of the dryland migrants became city workers. Others returned to farms in the Mississippi Valley. Others continued their trek westward.

The migration in and out of the Great Plains has meant that national wealth has been poured into the area in amounts almost equal to what it produced.

Even conservative and incomplete computations of this "private subsidy" are startling. A land use survey of 53 High Plains counties showed that 8,377,929 acres have been abandoned. At an estimate of $20 an acre, the total loss of invested private capital in land alone would be $167,558,580. On it are 10,485 abandoned houses, once worth perhaps $20,970,000. Besides, there were improvements such as fences and barns that would raise the total several millions of dollars. These amounts cannot but be considered as a subsidy to plains agriculture by private capital.

The basis of the problem today is not unlike that of 1890–1930, but several national factors make the social results more acute now—the failure of industry to expand in the past decade, so that population pressure upon the land has increased; the rapid mechanization of farming; a larger labor supply; changes in the sizes of farm units; drought.

In Haskell County during 8 years of drought, the average acreage of wheat harvested was only 28 percent of that planted; the average yield of acreage harvested was 4 bushels an acre. There were feed-crop failures, too.

I interviewed the heads of nearly all families in that county and asked, among other questions, how they managed to remain. All replied that if it had not been for the agricultural program they could not have held on. Most of them added that in the entire county not more than a half dozen families otherwise could have stayed. One business man said he opposed in principle Government aid to farmers but added:

"If it had not been for the agricultural program no one would be here now. I would not be here. The county would be grown up to weeds or blown away."

Two answers were given to a question as to why they remained. One was, "I don't know where else to go." The other, more frequent, was, "We like this country; it is a good country if we can just get rain."

YARDSTICKS AND THE FOUR-CARD DRAW

By H. H. FINNELL. Many wheat farmers of the Southern Great Plains have been accused of operating on the principle of everything to gain and nothing to lose. "Playing them blind" may be all right some times, but, with poker as an example, the advice is here given that the dryland farmer consider well his first four cards before staying in or making a raise.

"Playin' 'em blind" might be all right for a bunch of old maids, but our advice to the dryland farmer in the Southern Great Plains is to look at his cards before staying in, and especially before planking down a raise. It is not a game of everything to gain and nothing to lose, although many wheat farmers have been accused of playing it that way. Planting crops according to the calendar or signs of the moon, year after year, is altogether too much like gambling, and gambling in crop production in the Southern Plains area is neither altogether nice nor necessary.

One thing always to keep in mind in the semiarid region is that the making of a crop begins the minute the previous crop is off the land, regardless of whether the next crop is to be planted immediately or 18 to 24 months later. The progress of available soil fertility and soil moisture accumulation, which may or may not go on during the preparatory period, determines both the extent and the dependability of crop production.

Suppose you want to sow oats. The previous crop has just been harvested, either in the summer or the fall. The first thing you need to know is whether to plow, when to plow, and how to plow, in order to encourage a favorable fertility and moisture condition. Various crop residue and weed conditions as well as soil moisture determine the best steps to take. Then, having done what is within your power to influence and guide the forces of nature during this preparatory period, you come to sowing time in the late winter or early spring. The next thing you want to know is whether your efforts combined with the happenso's of the season were successful in preparing a favorable crop-producing possibility. To take an inventory of the conditions is as simple as turning the cards over and looking at them. Now, if the hand is not to your liking, you can throw it in and wait for a new deal. If you hold the hand and draw, other cards will be dealt between spring and summer.

The sorghum season is approached in almost exactly the same way. When sorghum planting time comes, however, it is rarely, if ever, necessary to pass. The results in this case depend mainly upon the size and kind of bet you make.

The Exciting Wheat Game

I realize I cannot go on much further without someone interrupting me and asking, "What about wheat?" Playing the wheat game is one of the most exciting because the stakes are high and the pot is big. But, it still is not a game of everything to win and nothing to lose, as many would-be wheat farmers in the Southern Plains will tell you.

You have doubtless witnessed many times the horrible example of a player who doesn't know when to pass. There are many fine points of science involved among the several decisions which need to be made in successfully guiding the preparation of the soil for the production of wheat; but, the most vital single factor in playing the wheat game is to learn when to pass and to have the sense to act promptly upon the conclusions of your best judgment.

The first wheat card is dealt during the month of July. Turn it up immediately and look at it. It is the July rainfall; it will tell you whether to disk, shovel, or list, or to let the stubble stand. It represents the kind of opportunity you have for effective soil preparation. Whatever its indications may be, don't forget about it because it will still be in the game as harvest approaches next year.

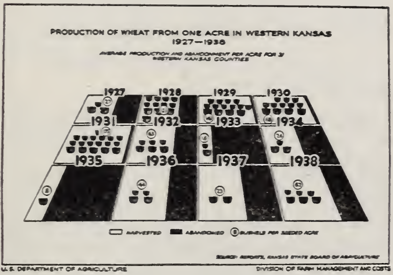
The next three cards will be dealt in September. They are No. 2, the soil moisture store, No. 3, the accumulated amount of available nitrogen, and No. 4, the incorporated unrotted trashy residue from the previous crop.

The most important thing not to do at this time is to bet or pass without looking at these first four cards. To be sure, there is a fifth card required to make out the hand, but it will not be dealt until the following spring. The decision has to be made upon the basis of the four cards in hand. If only one of them is good, the best you can do is draw a pair and the chances are against that. Suppose two of the cards are good. A pair is not worth much and the chances of drawing another to make three of a kind are even more remote. But, if you are holding three good cards, or four, it doesn't matter so much what the next spring deal turns out to be. Anybody who does not know what to do in any of these circumstances certainly has a lot to learn. I reiterate there may be a terrific wallop in playing them blind but I believe most players will agree that it is a better game to look at your cards, evaluate them, and play them for what they are worth.

Barging along blithely, not knowing what you are going to do from one month to another, is admittedly one of the most radical ideas introduced into crop management in a long time, but it is not nearly so haphazard as it may seem at first glance. It is not as haphazard, in fact, as planning ahead on conditions you cannot foretell. The result is a flexible crop rotation. The basic pattern of the rotation may be determined in any desired manner, so long as it is within the range of practicability and consistent with the potentialities of the soil resources in hand.

A Systematic Cropping Plan

A system of flexible crop management under semiarid conditions has an exact counterpart in principle under humid conditions. In both cases, the cropping system has been devised to be consistent with the natural conditions which control production. Under humid conditions, scientific research and agricultural experience combine in agreement upon a systematic cropping plan, but this is only because the natural conditions which afford crop production possibilities are systematic. They are sufficiently regular and capable of anticipation that it is not only possible but desirable that production be planned systematically and far in advance.



The principle of basing crop plans on known possibilities has very successfully prevailed under conditions of humid agriculture. The adaptation of this principle to dryland agriculture does no violence to the principle of crop rotation but it introduces flexibility because the seasonal sequence of conditions in the semiarid belt is unsystematically variable. A rational application of the accepted crop management principles requires the recognition of seasonal variability, the evaluation of it, and the progressive shaping of crop plans according to the accumulating effects of varying conditions.

The degree of flexibility should increase along with arid conditions until a point is reached where the frequency of crop-producing opportunities is so low that necessary protective ground cover to prevent wind erosion cannot be maintained without irrigation.

The Idea of Diversification

You are at liberty to accept conditions as they come or to create conditions for yourself within certain limits. In any event, the principle of planning crop production to take advantage of the soil conditions, whether they be systematic or unsystematic, is the same the world over.

The fault with the wheat farmer has not been so much a failure to accept the fact of variable seasonal conditions, as it has been his lack of acceptance of the idea of diversification. In this respect, of course, he is a generation or two behind humid agriculture in thought.

What the plains farmers lack in dependability of seasonal conditions they may well make up in the capacity of the deep semi-arid soils to accumulate in advance and hold in readiness for use both the moisture and the available plant food required to produce a crop.

The past failures of Southern Plains agriculture more often have been due to efforts to superimpose a system of regular crop management upon an unsystematic set of natural conditions, than to inadequate natural resources. A thing is not necessarily unreliable because it is unsystematic. Obviously any ill-fitting methods of utilization will be very unreliable, if merely by being mistaken or untimely they fail to lay hold of the currently available soil resources.

In the case of winter wheat, the crop which occupies the land for the longest period of time among those climatically adapted to the Southern Plains region, it has been revealed by research that roughly 65 percent of the influence which may be brought to bear in determining what the yield of grain will be, has already been brought to bear in the soil at the time of sowing the crop. In other words, what it takes to produce wheat has in a large measure already transpired or has been accumulated in the soil by the time it is necessary to decide whether to plant.

Depending on Disadvantages

With other types of crops, which occupy the land for shorter seasons and therefore are subject to less of the hazard of seasonal uncertainty than winter wheat, it is possible to be even more sure of existing production possibilities at planting time. Planning the sowing of spring grain or the planting of summer feed crops may be undertaken with equal or better assurance than winter wheat.

With all the inconsistencies of the plains climate, there are some dependable features. It is recognized that winter follows summer with a reasonable degree of regularity. This is important to consider in planning farm operations, but what is more important, is the fact that the amount and distribution of rainfall varies unsystematically. This is a sort of disadvantage to anyone who would like to plan a systematic rotation for crops, but, shall we say, it is a disadvantage we can depend upon.

It is this unsystematic variation in the amount and distribution of rainfall that creates the year-to-year variations in crop-producing possibilities. Human nature already possesses a sufficient amount of curiosity and daily personal interest in the subject of weather that it does not require a big effort to follow intelligently the progress of seasonal conditions. This continual and involuntary weather consciousness on our part might as well be lumped in with the other natural factors with which we have to deal in mastering the skill of land utilization.

Actually, the farmer is not nearly so completely at the mercy of seasonal variations as might at first appear. There are six different successive periods during the year when he has the opportunity of making important decisions relative to land preparation and crop management, decisions which should be based upon an appraisal of existing soil and moisture conditions.

Along with these several mileposts in the cycle of crop succession goes also the opportunity definitely to contribute something to the hastening of, or the bettering of, the next favorable crop producing opportunity. This is especially true in regard to water conservation. If the simple objective be followed of saving all the water possible, storing it in the soil within the root zone of common crops until enough has been accumulated to assure the successful production of the next adapted crop in season, and at the same time so managing the tillage operations and

Population

> *What we may expect is that population trends will be integral parts of the trends in cultural patterns. If the patterns are in the direction of noncommercial agriculture, farm birth rates will fall relatively slowly; if they are in the direction of an ever-increasing commercialization of agriculture, they will probably fall faster.*
>
> —Carl C. Taylor

grazing of the fields as to preserve the trashy residue of the previous crop needed to prevent wind erosion, the maximum efficiency of soil and water utilization consistent with safety against erosion hazards will have been achieved.

The soil and water relations of the Southern High Plains being what they are, the climatic conditions of this area being what they are, the list of adapted crops being what it is, and agricultural economics being what it it is, you just naturally find yourself practicing diversification by means of a flexible cropping system almost without premeditation or design. It is the natural, the practical, and the scientific thing to do.

No Mysterious Formula

Research work and experience in the field of crop management as applied to the various problem areas in the Southern Great Plains region are still in an elementary stage. Much has been said about the spectacular results of water conservation research and the even more spectacular demonstrations of farmer utilization of water conservation practices, but the stabilized increase of production by means of crop management practices is fully equal in value. The gains in efficiency of land utilization, which are potentially available to the farmer through crop management practices, may undoubtedly be intensified if overlaid upon an effective system of water conservation, but the principle applies and the possibilities exist just the same where water conservation opportunities do not exist or even where they exist and are neglected.

Experimentally, the correlated practices of water conservation and productive crop management have provided the most effective safeguard against wind erosion and at the same time the most efficient known utilization of soil resources. The coordination of water conservation and crop management is natural and easy. When the same relation is generally recognized between seasonal variability and flexible rotation as now exists between drouth and water conservation methods, a major problem of land utilization in the Southern Plains area will have been solved. Making crop planning a continuous process should not in any way detract from the dignity of the task. The productive value of timely and appropriate variation is surprising.

That the forecasting of crop producing possibilities at sowing time is quite reliable is due not to any mysterious formula for foretelling events. It is entirely based on the proper evaluation of significant events that have already transpired.

Awakening INTEREST IN GRASSLAND FARMING

A SYMPOSIUM. "Next in importance to the divine profusion of water, light, and air, those three physical facts which render existence possible," said John J. Ingalls, "may be reckoned the universal beneficence of grass." Several conferences in various parts of the United States this summer were based on that theme. Excerpts are here presented from four addresses given at the Southern Great Plains Grassland Conference in Amarillo, September 5 and 6.

USES AND VALUES OF GRASS

By P. V. Cardon

IT HAS been roughly estimated that approximately 60 percent of the total land area of the United States is grazed at least part of the year. The forage annually grazed from this vast acreage, plus the supplemental feed crops taken from many additional acres, is said to approximate half of the total value of all crops produced each year in this country.

If these are to be accepted as reasonable approximations, then one might infer that grass already occupies a dominant position in American agriculture and that there is little if any further place for grassland areas.

Such an inference, however, is not warranted by underlying facts. These facts need only to be mentioned in order to reveal clear and urgent reasons for judiciously expanding the grasslands of this country and for developing ways and means of utilizing economically the old and the new grasslands alike.

The first outstanding fact to be regarded is that practically all of the land now in grass in this country is land generally unsuited to the production of cultivated crops.

Second, as a result of the general tendency among Americans during the last hundred years, particularly, extensive grassland areas have been broken which should have remained in grass since they are not suited to other crops.

A third fact is that much of the land now in crops other than grass would be benefited by being returned temporarily to grass. This is the basic fact underlying soil conservation measures aimed at holding soil in place or at improving the soil structure, the chemical composition of, and the biological activities in, the soil.

A fourth fact is that grass may be grown advantageously, as circumstances warrant, to replace crops in surplus production and thereby aid in balancing the agricultural output of the Nation. This, in part, is the basis of recent agricultural adjustment activities. There is reason to believe that in meeting the impact of present disturbed international relations, grass will play an increasingly important part in effecting crop acreage adjustments.

A fifth fact is that by according to grass its rightful place as a crop in American agriculture, we can produce not only more but better grass and thereby derive from it larger benefits.

These, and other, facts have been recognized and taken into account in connection with recent national agricultural activities, the outstanding result of which is to turn America toward a grassland agriculture. This is a logical development and it is becoming more and more defensible as this country strives to adjust its farming to a drastically changed and continually changing situation.

I URGE a shift of emphasis in our talk about grass. I would not lose sight of or neglect the incidental values of grass as a tool in preventing erosion or in meeting any other soil conservation problem, but I would stress the importance of grass as a farm crop worthy of as good land and as much managerial skill as any other crop. And I would emphasize particularly the importance of determining more clearly the place that grass may occupy in farm practice in order that the farmer might derive from its culture all of the benefits to which he is reasonably entitled.

I have said that the extent to which farmers find that they can use grass to advantage will determine its place in agriculture. Now grass has many uses. Even in seeming idleness it has value. It holds and enriches the soil, even when neglected as a crop and allowed to stand untrammeled.

But it is in its economic use that grass is most valuable. It may be valuable as a soil cover while "idle" but, in an economic sense, it must pay its way. The farmer must see that it pays to plant grass, if he is to retain a continuing interest in planting it. He may believe in all that he is told about the social importance of preserving the land for future generations of farmers, but he has the immediate concern of making a living, of housing, feeding, and clothing his family; and of being able to pay his taxes, support his church, and take an occasional vacation.

Farmers generally are more conscious of grass values today than ever before, and many of them believe, if they do not know, that grass pays. Some of the ways in which they believe it pays are these: While serving as a source of feed it covers the land and protects it, at the same time improving the soil structure as well as inducing favorable chemical and biological changes in the soil. Then, when in favorable locations its place is to be taken by the next crop in sequence, grass is turned under and continues for a time to enrich the soil, to an extent measurable in the yield of succeeding crops.

But whether these obvious and well-known uses of grass pay in measurable monetary profits is still largely a matter of conjecture.

GRASS CULTURE if it is to be made profitable, however, demands good grassland management. And good grassland management calls for knowledge of how to establish and maintain grass and how to use it to best advantage. This entails knowledge of grass species, their habits, and cultural requirements. It entails also a knowledge of fertilizers and their use on grass, if their use in a given region is practicable. It entails, finally, a knowledge of grazing practices likely to get the most out of grass while retaining it as a desirable land cover.

But I would stress the fact that in grassland farming, good management combines all of the skills of soil management and crop husbandry and in most instances of livestock management. So when we think of grassland agriculture, we are not thinking of a return to extensive, pastoral farming but rather of an advance toward a high type of intensive farming.

Grassland agriculture, as I see it, is a flexible agriculture, adjustable to national needs. It does not presume that all land is to become and remain permanently as grassland although much of it may do so, particularly the land not suited to tillage. Where conditions permit, however, this type of agriculture presumes a periodic breaking of grassland in preparation for other crops. The total grass acreage consequently may be expanded or reduced to meet individual, local, regional, or national interests. Grassland agriculture, in brief, is a process of balancing crop and livestock production.

AS IT ONCE WAS

By W. G. McGinnies

THE GREAT grassland area of the United States lies between the western and eastern forest belts and extends from Canada to Mexico. This grassland area, broken only by river courses and occasional buttes or lone mountains, is characteristically an area in which trees have failed to develop either because of unfavorable soil conditions, poor drainage, and aeration, intense cold and wind, deficient moisture supply, or repeated fires. Grasses of one kind or another are admirably suited to withstand conditions of excess moisture, excess drought, and fires which would destroy tree growth.

The 100th meridian roughly marks the division between the prairie grassland on the east and the shortgrass or plains grassland on the west, while south of the shortgrass in the higher land of west Texas and lower southern parts of New Mexico and Arizona is to be found the mesquite grassland.

Our concept of the grassland vegetation prior to the arrival of the Indian was that more or less of a biological equilibrium had been reached within the bounds set by climate and soil. Grazing animals probably were never sufficiently abundant to cause widespread overgrazing, and fires were sporadic and relatively infrequent.

Little is known of the relation between early Indian cultures and the grassland vegetation. Prior to the introduction of the horse, evidence tends to show that the condition of the Indians was poor. The plains had had no agriculture and supplied little or no wild fruit and no nuts.

The Indians were dependent on game, and although game was not scarce, it was, with the single exception of the buffalo, very wild and wary and could be approached on foot only with the greatest difficulty.

WITH THE COMING of the horse, the whole life and economy of the plains Indians were changed. So important was the horse that anthropologists have named the period extending from 1540 to 1880 the "Horse-culture Period." It was the horse and the buffalo, but primarily the horse, that enabled the plains Indians to hold out against the white man. During this period the grassland area was subject to the influence of grazing by buffalo, antelope, horses, and other herbivores and at the same time was strongly influenced by recurrent fires, many of which were set by the Indians.

Between 1540 and 1784 horses spread to all the plains tribes and even into the forested regions, but it was in the plains area that the development was greatest.

It was during the period dominated by the Indian and his horse that the buffalo reached its greatest abundance. Authorities differ as to the numbers of buffalo, but all agree that they were very numerous. Hornaday estimates that the herds might have totaled 12,000,000 and they certainly reached 4,000,000. Jared Smith, on the basis of information available, estimated that 4,000,000 buffalo grazed in the district south of the Platte River, retiring to the plains of western Texas and the Indian Territory at the approach of winter.

Most authorities agree the combined influence of grazing animals, including rabbits, prairie dogs, antelope, buffalo, and wild horses, resulted in widespread overgrazing prior to 1850 and that following this date there was a great increase in the growth of vegetation as the numbers of native animals declined.

As the number of buffalo decreased during the third quarter of the nineteenth century, there was a notable increase in the growth and luxuriance of the grass. It was this grass growing under favorable conditions and light grazing use that gave the early stockmen their rather extravagant ideas of the grazing capacity of the prairie-plains region.

FOR OVER three and one-half centuries following the discovery of America, the great grassland area remained a virgin territory as far as settlement by the white man was concerned. Then, within the span of a single lifetime, the grassland area was taken from the Indian and the buffalo and built into a gigantic cattle kingdom which later gave way to an agricultural empire. The delay in development was due to geographical location, inexperience of the early settlers, and unfriendly Indians.

The early Spanish explorers found no gold and little else to interest them in the plains region. While several expeditions were made into the grassland area, no serious attempt was made for colonization.

As far as most of the plains area is concerned, it can be said that Spaniards left it as they found it. They did exert an important influence on the southern and western edges, but for the most part, they played a minor role in the development of the grassland area.

During the first half of the nineteenth century the advance guard of the English-speaking forest dwellers began to emerge into this new environment where there were no forests, no logs for cabins, no rails for fences, and only a few springs and running streams. These pioneers, equipped with the weapons, tools, ideas, and institutions which had served them in the forested areas now set out to conquer a new environment. Their effort constitutes a gigantic human experiment with an environment.

The relation of man to his environment is similar to that of any other organism. However, man is a very highly adaptable organism and at the same time has a great power to modify the environment to suit his needs. In spite of these characteristics, civilized man encountered many obstacles in the development of the plains, but once he gained a foothold he moved rapidly—perhaps too rapidly to conquer and subjugate this great grassland area.

In 1870 it is estimated that there were 5,000,000 head of cattle in Texas, and at that time these cattle were largely confined to the eastern settlements and southwest Texas. Records indicate that practically no cattle at that time were to be found west of the 99th meridian. In fact, in 1880 after the kingdom had spread, fewer than a million cattle were to be found west of the 100th meridian.

Trailing livestock to markets was an hazardous adventure, but in spite of the difficulties to be overcome, more than 4 million cattle were delivered to northern shipping points between 1866 and 1880. In addition, many herds were turned directly west to the ranges of New Mexico, Arizona, and Colorado. Others went to Montana, Wyoming, and the Dakotas, and some into Canada. Despite this migration of cattle, the number remaining on the home ranges of Texas was greater than before.

THE SPREAD of the range and ranch cattle industry over the Great Plains in the space of 15 years is one of the outstanding developments in American history. While the development of the cattle kingdom was complete within itself, it was subject to the general conditions of the Nation. It was affected by economic conditions in the East, such as the panics of 1873 and 1893 and the boom of 1885. It was affected by the railroad extension, the invention of barbed wire, and the adaptation of the windmill, and finally, it was affected by the immigration of the small farmer.

The great boom of the early eighties was a time of golden visions—a brief era of wild extravagance in theories and in practices. Several railroads had crossed the plains.

Money was plentiful in the country as a whole and was seeking an outlet for investment. The eastern part of the United States was becoming more crowded and farmers were pushing farther and farther into the cattle country. Finally the Indians had been reduced and were strictly controlled so that people were no longer held back from the plains by fear of the scalping knife and the tomahawk.

In 1885 the bubble burst. The winter of 1885–86 was severe from Kansas southward to Texas and New Mexico. It is reported that 85 percent of the cattle were killed in some areas. In the North, the summer of 1886 was hot and dry. Grass was short and cattle were forced on the market at reduced prices. In November severe winter set in with blizzard following blizzard. It is estimated that livestock suffered a mortality of 40 to 60 percent.

Disaster followed disaster. There was a severe drought in the Southwest in 1886; in Colorado in 1888–90; in the plains and Southwest in 1893 and 1894.

Financial confidence which had been built up in the early 1880's started to weaken in 1885 and was completely upset during the winter of 1886–87. When the depression caused loans to be called, credit liquidation brought forced sales and bankruptcies. Thus ended the bonanza period of the cattle kingdom.

It is quite possible that this brief period of overuse would have resulted in but little permanent damage to the range if it had not been for the arrival of the farmer whose activities resulted in further and further restriction of the range area, so that adjustments in livestock numbers always lagged behind the ever decreasing grazing capacity.

The plowman invaded the grassland area in the east central region and spread northward and southward as he advanced to the west. His invasion was held back by his forest heritage, warlike Indians, lack of building and fence materials. His former prejudices were discarded when he found that the grassland produced excellent crops, and without the drudgery of clearing timberland. The development of the repeating rifle and the Colt revolver took care of the Indian problem. The invention of barbed wire solved his fencing problems and the railroads transported building materials to him, and his farm products to the eastern market.

Once started, there was nothing that could stop him; heedless of all warnings he moved further and further west into drier and drier areas.

NATURE'S WAY

By O. S. Aamodt

THE PLANTS that persist naturally in any given region over a long period of time are the ones that have been sucessful in adjusting themselves to the factors that limit the growth of vegetation. In order to survive in any given region, the plants would have to withstand the extremes in drought, cold, wind, insect, diseases, and competition with other plants common to the region in which they are grown. Those species and varieties of plants that can grow to maturity and reproduce in competition with other plants are the ones that are selected by Nature's "fit and try" process to cover the land.

The crop map of the United States was developed by the farmers from the time they first settled on our eastern shores and began to destroy the natural vegetation and substitute for it various kinds of cultivated and grassland crops. This substitution began in the Eastern States and gradually progressed westward until practically all land of any agricultural value was covered with crops instead of the natural vegetation developed by Nature.

When the farmers brought with them crop seeds from the Old World, they carried on a process of "fit and try" very much as Nature did to find out which crops were best adapted. The only difference was in time, the farmer taking a few hundred years to make a pattern that took Nature many thousands of years.

As time went on, the farmer found that the European varieties were not so well suited to the soil and climate that existed on this continent as they were to the conditions that existed in Europe and he proceeded to develop new varieties. Later, the agricultural experimental institutions, both State and Federal, came to his assistance and helped to develop not only varieties that were better adapted but also better methods for seeding, cultivating, and harvesting the crops.

Diseases, insects, and weeds became more prevalent and the experiment stations helped the farmers develop better methods for the control of these pests. The success of our agriculture is measured to a large extent by the degree to which we have been successful in substituting adapted crops for Nature's adapted vegetation. Naturally, the farmer found, just as Nature did, that in certain regions the climatic and soil conditions were such that certain kinds of vegetation did better than others.

THERE IS a remarkable similarity between the map showing the various kinds of natural vegetation that covered the United States before it was destroyed by the woodsman's ax and turned under by plow, and the map showing the type of farming in the various sections of the country today. For many years the botanists and foresters of the United States have recorded the type of natural vegetation that existed as a permanent cover on the land.

This similarity between the type of natural vegetation and the type of farming is not merely a coincidence. The growth of plants developed by Nature or developed by man are influenced in their adaptational requirements by the same dominating climate. Vegetation must be adjusted to fit into the prevailing climatic conditions. Any failure to do so brings about increased hazards to the crop. Nature carries on a program of conservation at an equilibrium determined by the climax vegetation. Man carries on a program of soil use in which he works toward an equilibrium determined by his cropping system and by the efficiency with which he has managed the soil. It is possible to build up soils responsible to treatment with grass and proper management.

New varieties are needed. There is a change in environment—even more than there was 75 years ago. In some other part of the world there may be species that will grow better in this area even than the native grasses that have grown here for some 75 years.

We have tried to find what we are breeding for, in terms of environment. A farmer throws away what does not fit into his environment, and grows something else. It is not a case of throwing away grass and getting something else; it is a case of finding a grass that will fit into this new environment.

And let me emphasize that the environment of soil and make-up of the soil and even the weather are not the same environment that was here 50, 100, or even 200 years ago. We need in this region a type of plant that will grow luxuriantly in the early spring and late fall, at a time when other species are not growing very luxuriantly.

One of the most striking things I have seen is the remarkably limited stabilization of most of our main species in the West. Grasses that are indigenous to the South lose their hardiness when moved north; northern grasses lose their value when moved south. Most species of grasses have a limitation of 200 miles. Any grass grown here well must be able to reseed easily and must be free from any weedy habits.

We have found in experimentations that some grasses and legumes, or grasses and some weeds, have a distinct antagonism for each other. Why, we don't know. I am wondering if some antagonism between the native grasses and weeds causes the enormous failure of our grasses to grow in this area. We need research, such as that that has been made in corn, and until we do have that research, we shall not have much progress in the growth of grass.

NEW DIRECTIONS

By Sydney H. Watson

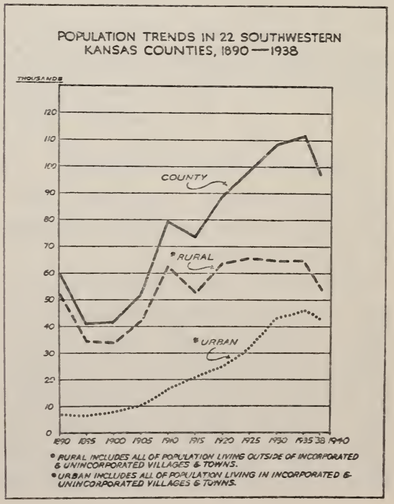
FARMERS AND RANCHERS who have attempted to put land back to grass in the Southern Great Plains realize that it is a difficult task, and there is no question but that getting grass back on 6 to 8 million acres of land in this semiarid area is the biggest revegetation problem in the United States.

Under favorable conditions natural revegetation may be very rapid as evidenced by the fact that a fairly satisfactory grass cover may be found on fields which have been out of cultivation less than 5 years. As opposed to this rapid recovery are fields which have not been cultivated for the past 40 or 50 years and yet little or no grass is to be found.

These wide ranges in length of time required for natural revegetation are influenced by many factors, some of which are: Number of years cultivated, intensity of cultivation, type of soil, amount and distribution of rainfall, degree of erosion, type of vegetation common to the area, intensity of grazing, adjacent blow hazards, and proximity to grassland which might serve as a source of seed.

In both natural and artificial revegetation the first step toward establishing grass is to obtain stabilization, or in other words, stop land from blowing.

In natural revegetation the goal is to obtain a weed growth as soon as possible and maintain this growth until more desirable vegetation has replaced the weeds, whereas in artificial revegetation an attempt is made to retard or minimize weed growth while "seeded grasses" are becoming established.


POPULATION TRENDS IN 22 SOUTHWESTERN KANSAS COUNTIES, 1890—1938

* RURAL INCLUDES ALL OF POPULATION LIVING OUTSIDE OF INCORPORATED & UNINCORPORATED VILLAGES & TOWNS.

* URBAN INCLUDES ALL OF POPULATION LIVING IN INCORPORATED & UNINCORPORATED VILLAGES & TOWNS.

Meeting Today's NEEDS IN THE LAND OF MANANA

By GLEN GRISHAM. Where Europeans first established colonies in the United States there remain Old-World customs, speech, habits, thought. And there are poverty, isolation, wornout farms and farming systems—"one of the most challenging problems," Mr. Grisham says, "of human and land use adjustment planning in the Nation."

Northern New Mexico, particularly the areas drained by the upper Pecos and the Rio Grande, was the scene of the first European colonies in the United States. A thousand years before the Spaniards came, Indians settled in the region.

The Spanish-American villagers, who now comprise the major part of the population, are located on small, irrigated, but inadequate land holdings along the major water courses.

In former years, the Spanish-Americans had access to considerable range land near their farms on which they ran herds of livestock. Since 1890, the control of range lands by commercial livestock interests has steadily increased, and many community pastures have been acquired by these operators.

The natives were driven back to their irrigated acreages and began to depend upon outside work for supplemental income formerly provided by livestock. Since the decline of the labor market about 1930, Government relief agencies have provided much of the cash for buying clothing and food. But because of the peculiar nature of the economy in these Spanish-American communities, the available relief programs could give only limited assistance.

Today this area presents one of the most challenging problems of human and land use adjustment planning in the Nation. Those familiar with the complex circumstances believed it advisable to develop a pattern of assistance that would be applicable to the situation and acceptable to the population. Consequently, in attempts to work out a program of self-subsistence for these families, the Farm Security Administration worked out an experimental plan in the village of El Pueblo in February, 1939.

The Beginnings of the Spanish Folkways

Factors contributing to the present situation are most easily defined by tracing the history of these communities and studying the characteristics of the natives and their physical resources.

Onate's entrada in 1598, in which he brought 400 colonists to settle at

San Gabriel near the junction of the Chama and the Rio Grande, formed the nucleus of a purely Spanish culture whose traditions were so intensified in isolation that were one of the original colonists living now he would see very little difference in the folkways and customs. The speech of today, with its pithy proverbs and grandiloquence, retains the wit and character of Andalusia.

There are many reminders—in architecture, cookery, language, and customs—of the colorful days of the early Spaniards in New Mexico. The natives are still temperamentally much the same as were their fathers. Their culture, modified by the evolution of long isolation and poverty, is still distinctly Spanish in speech, customs, and religion.

In the dry, clean air of the Southwest all things change slowly; growth is slow, and decay even slower. Here, in these forgotten valleys, wheat is cut by hand. Goats and horses stamp out the grain on mud threshing floors before it is winnowed by hand. Blue corn for atold and tamales is prepared with the metate and mano. Wheat is ground in the local molino between pumice stone grinders run by water wheels. Staple foods are corn, pinto beans, chili, dried fruits, and squash.

New Mexico is called the land of manana. It is also the land of today—the philosophy of enjoying today permeates the country. Manana is that nebulous tomorrow for work and worries. The native lives to be happy today—not that he must slave today to be prosperous 20 years from now. Today there is God's sunshine; tomorrow may never come and, if it does, the Lord will provide children to care for old age. Fiestas, bailes, and masses weave a happy, simple pattern of life.

Cash is always scarce and so are the necessities of life, but poverty is clothed in dignity. Los pobres live on meager incomes and the free dones de Dios sustain their racial pride with a quiet grace, like the dwarfed juniper and pinon that live close to the ground to conserve their sustenance. Farming and running livestock have been the heritage of the people for generations. They have no background or aptitude for industrial work.

Isolated as they are, with few facilities for improvement and few opportunities to learn of better methods, they have continued to farm as their fathers farmed before them. They plow their land 3 or 4 inches deep with a 10-inch plow and a pair of 600-pound ponies, broadcast grain by hand, and then go over it with a harrow. They have no knowledge of crop rotation, except that they plant alfalfa when they can get money for seed. The soil originally was rich in lime and plant nutrients, but the continuous cropping of corn and wheat has depleted it so that yields are no more than half of those produced in the memory of present inhabitants.

Romance—and Poverty

Early Spanish settlers sent their children to Mexico, New Orleans, St. Louis, or Europe for an education; or, if a family was too poor the children simply did not learn to read and write. The first effective public school law, enacted by the territorial government in 1891, provided for 3 or 4 months of operation each year. Not until 1912 were provisions made for county high schools, whose establishment was voluntary on the part of the counties. Educational facilities for rural people have never been easily available. Today, one of the larger counties in northern New Mexico, densely populated and class A in taxation rank, has high schools only in the county seat and one other town.

Agricultural extension work has not reached the valley communities. Natives, not realizing the benefits they could receive from agricultural workers, have not cooperated to the extent that those in other communities have. Because the native is a part-time farmer and is frequently away from home, it is difficult to carry out farm improvement programs.

Thus, we have a picture of rural northern New Mexico. Similar conditions obtain in El Pueblo, a farming community 29 miles southwest of Las Vegas and 5 miles south of the Las Vegas-Santa Fe Highway on the Pecos River. Most of the houses are grouped in pueblo-type villages, built against the hillside above the ditch.

Most farms, of 5 and 6 acres, have large, adobe houses that lack all sanitary facilities, except one or two small windows in each room and a fireplace, which heats the room and provides a source of ventilation. The Pecos, which may have been free from contamination in the early days of the settlement, has continued to be the main source of water supply. Medical service was not available until recent years when the United States Health Department began sending county health nurses into the community. Nature was the only safeguard against disease.

The average annual cash income of the El Pueblo families in 1938 was $280. The figure is based upon the incomes of 53 families, the heads of which are able-bodied or which have some members of the family able to work, and do not take into account the 8 who are old, sick, or crippled, and get old-age pensions or other assistance. Of the 53 incomes averaged, 27 represent WPA wages, and 11 represent salaries from private employment. This average does not necessarily reflect the standard of living, as in almost every case those working depended upon their wages for their total needs and did not attempt to produce any of their living. These people do not know what good health is nor what constitutes an adequate standard of living. The average family consists of 5.4 persons.

An old custom, handed down from generation to generation, whereby a father divides his land among his children, has broken down the original large holdings into narrow strips of farm land, many of which now are not more than 20 yards wide and vary from 1 to 6 acres in area.

It has been impossible under the system of farming practices for a family to make a living from its small tract. This in itself constitutes a serious problem. All the available farm land is occupied; there is no room for expansion. To help a few increase the size of their units would mean the displacement of another group in like circumstances.

Not by Bread Alone

Obviously, the point of attack is the family, the home where it lives, and the land where it works. The first need was to provide for the physical necessities of life. It is not possible to develop in a man a broader outlook on life, to enlarge his vision, nor to teach him to look to higher standards when he and his family are undernourished, poorly clothed, and inadequately housed.

Through generations of life close to the soil, these people have developed an intense love of the land and regard it as a home and a living. It is not a resource to be bought and sold or speculated upon. It is regarded as an integral part of their lives and of their families. But they have sacrificed their future prosperity in their abuse of the land to meet immediate needs.

Work grants became available at the start of the experimental program to meet the immediate needs of the family. An improvement program was worked out with each family, and numerous technical aids were provided.

It is necessary to remake the vision of the community. Group activities in which the people now participate have been allowed to become more or less routine activities found only in the organization and maintenance of irrigation ditches, in school, and in the church. Horses may be loaned, but machines seldom, if ever, except to a close relative. Strict accounting is kept of any such loan or of exchanged work, and payment in kind is expected.

Since the inception of the program, community consciousness and activity have been encouraged. A committee, chosen by the people, has functioned as a nucleus in the promotion of the community welfare. Funds providing for the purchase of garden seed, baby chicks, fertilizer, canning equipment, material for screens and doors, nursery stock, and similar items were deposited with the secretary and the quantity purchases resulted in savings to individual families.

A community building was constructed by the people. Facilities are now available for group social and educational activities. Equipment will be provided for weaving, sewing, cooking, blacksmithing, and woodworking.

It was absolutely essential that farming units be enlarged or some additional resources be made available, from which supplemental income could be derived. Although land was not available which could be used to increase their farming units except at the expense of others, an opportunity did exist for the acquisition of additional grazing land.

Late in 1939 the New Mexico Rural Rehabilitation Corporation purchased 26,464 acres of pasture land, lying within 3 miles of the El Pueblo farms. Cooperative control of this land is vested in the Farm Security Administration and the El Pueblo people. Stock pens, scales, and all livestock shipping facilities are available. As the land is to be used strictly for range purposes for an established community, no housing facilities are needed. It is proposed to begin using this grass land in 1941 as a community pasture to accommodate subsistence herds for 50 El Pueblo families. Development work, like fence building, construction of soil conservation structures, and stock dams, is going forward.

Cooperation in Building and Buying

To achieve the goal—to enable all families in the community to achieve and maintain an adequate standard of living and possibly to point the way for similar work in other communities—conditions must be improved along all lines and every opportunity or resource must be utilized.

Work done in the first year to improve farm and home conditions, develop community enterprise, and to make more resources available will serve as a general foundation upon which the general program can be projected. Improvements in sanitary facilities, diets, land use, and farm and home record keeping are, to an extent, superficial, because the need for them and their value (except in relatively few instances) have not penetrated the consciousness of the people. Many improvements have been made and records are being kept simply because they are required.

Cooperative purchasing and the building of the community house have been carried out as informally as possible and will continue to be so handled until the people have learned the real meaning of cooperative effort, have developed sufficient leadership within the community, and have shown sufficient interest and understanding as to be able to assume a part of the responsibility for the actual policies of operation.

The first step in providing additional resources for use of the people is not yet completed, and even after the pasture unit is stocked and operating it is not assumed that the people will be immediately capable of its management. The ultimate realization of the objective will evolve only from a well-planned and efficiently executed educational program.

An uneducated people, culturally, socially, and emotionally bound to the tradition of their grandfathers, ignorant of what lies within their reach, with no knowledge of how to reach for it, they must be awakened to a realization of their needs; a consciousness of their aptitudes, and an eager desire for progress.

From this will come a pattern for the rehabilitation of the El Pueblo community which can then be projected upon a larger scale for the assistance of similarly situated groups in other localities.

Balance

Nature has established a balance in the Great Plains by what in human terms would be called the method of trial and error. The white man has disturbed this balance; he must restore it or devise a new one of his own.

—The Future of the Great Plains

WALTER PLAGGE
—ONE WHO STAYED IN THE DUST BOWL

By NORMAN G. FULLER. Much has been written about what happened in California to fugitives from the Dust Bowl. Here is an article about a man who bravely kept on farming in the heart of the drought area and is winning against big odds.

In 1930 there were a few more than 1,700 families in Baca County, Colo. Today there are only 650. One of them is Walter H. Plagge.

Things looked bright the first 2 years after his arrival in 1929 from Kansas, where land, at $130 an acre, was too costly for him to buy. He had a bumper wheat crop in 1930. Baca County never had had a bigger wheat harvest than that of 1931, but that year the price was only 25 cents a bushel.

In 1932 the drought began. Wheat almost failed, but Plagge made a fair feed crop of sorghums and corn. Wheat failed in 1933, and feed was short.

In 1934 the dust storms came.

"It was a bad year," Plagge recalls. "The dust started blowing in the early spring. It hardly missed a day all summer long. We didn't have any of those 'black roller' storms, but dust was in the air nearly every day."

Practically no crops of any kind were made in Baca County in 1934. In 1935 the dust came again. The worst dust storm Plagge ever saw was the "black roller" of April 1935.

A "black roller" in Baca County is impressive and terrifying. The dust can be seen while it is yet miles away over the prairies. Usually an almost dead calm precedes it, but as one watches the approach of the great perpendicular wall of black dust intershot with swirling gray, one knows that there is a tremendous wind behind it.

The dust storm of 1935 was probably the worst that ever hit the plains. It started in northeastern Colorado and northwest Kansas and swept south across the plains at 30 or 40 miles an hour into Texas and Oklahoma. It picked up tons and tons of dirt as it swept along like a tidal wave.

After the crop failure in 1934, Plagge had to sell most of the cattle that he had accumulated since arriving in Baca County 5 years earlier. Cattle were cheap and scrawny from scarcity of feed, but the Government came to the rescue and bought most of them.

In the spring of 1935, Plagge had only eight cows. Four of them died from cockle-burr poisoning. There was no feed in the country; maddened by hunger, the cattle broke into a neighboring field for the few green shoots of cockle burrs. The morning Plagge found them dead was the nadir of his despair and prospects.

Diversification and Conservation

Things gradually got better for the Plagge family after that. They could not have become worse. He quit planting wheat altogether. The feed crop of 1935 did not make grain, but it made forage. Again Plagge began to increase his livestock herd to keep from being entirely dependent upon the inconsistencies of the plains climate and the gamble that goes with one-crop wheat farming.

Since then, he has depended chiefly on milk cows, hogs, chickens, and turkeys. In 1937, with a Government loan, he bought some white-faced beef cattle. He raises practically all of the feed for his livestock. The summer crops were good this year, but even a feed-crop failure this fall would not force him to sell the cattle, as he did in 1934, because he has stacked a 2-year supply of feed.

He got the idea of diversification and conservation when others were saying that the "drought can't last forever—we'll make a killing next year."

Another setback occurred in 1937 when "the grasshoppers came and ate everything green on the place, even pastures."

The Plagges live in a modest four-room house 4 miles southwest of Pritchett, Colo., on a farm rented from a man who lives at Bucklin, Kans. Mrs. Plagge and the two children, Irene, 13 years old, and Walter, 10, help with the chores.

All the farm houses on the 15-mile road to the farm are deserted.

Plagge started farming in Baca County with 640 acres, 320 of it in pasture, but since 1937 he has increased the size of his farm and now operates 1,280 acres, rented on long-term leases from four owners. He cultivates only 500 acres; the rest of it is in pasture.

He has planted no wheat since 1934, but he expects to sow some this fall if the season is favorable.

"It simply doesn't pay to plant wheat in this county unless you have moisture in the ground at planting time," he believes.

Contouring, an Idea from the Europeans

Even though the land is owned by somebody else, Plagge has tried to conserve the soil and improve the farms. He has terraces on nearly all the cultivated fields because they hold the water on the land. He plants and cultivates all his crops on the contour. Boys from the Civilian Conservation Corps camps at Springfield, Colo., helped Plagge build the terraces. Soil-conservation specialists from the Department of Agriculture gave him pointers on planning his farming system so that he can make more money and conserve the land.

Plagge got his first ideas about contour farming, however, when he was with the Eighty-ninth Division in the Army of Occupation of the Ruhr in 1918.

"Back in Kansas we thought good farm land was level land and everybody farmed by the points of the compass in a square pattern," he says.

"When I saw those German and French farmers running their rows around the slopes, it gave me an idea that it might work in this country. Although the land is pretty flat here in Baca County, we still lose a lot of water when we got a heavy rain, and I think this terracing and contour farming are just as important here as on one of those steep hills of Germany."

The records he and Mrs. Plagge keep of all their farm business show that their fortunes have been steadily improving since 1935. Each year the invoice made on January 1 has shown their worth to be a little higher than it was the year before. He has had some help from the Federal Government, and he owes the Government some money borrowed in 1937 to get him started with a herd of beef cattle, but he has paid part of the loan back and expects to clear the rest of it up within a few years.

He now milks 8 Holstein cows and has about 40 head of beef cattle and he sells a few steers each winter. He keeps two brood sows on the farm and always has some fat hogs to sell and butcher for the family's meat supply. He raises about 300 chickens and 100 to 300 turkeys; they bring in some money, but he depends primarily upon the sale of cream for a steady income.

Democracy and Community Responsibility

Through all the worst years, the Plagges have remembered their responsibilities to their children and to the community. He is president of the local chapter of the Grange, a member of the County Land Use Planning Committee, and chairman of the Farm Program Building Committee for his community. He takes an active part in the affairs of the Western Baca County Soil Conservation District and is a member of the American Legion. He and Mrs. Plagge are leaders of the Pritchett 4–H Clubs, among the outstanding clubs of the State.

Plagge puts it this way:

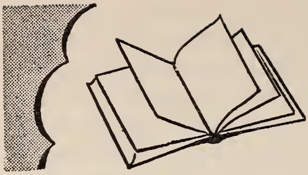
"We know we haven't got a ghost of a chance of ever getting rich, but we are trying to start our children off right. In fact, that is our biggest job and we don't want to fall down on it.

"An individual of any community should contribute something to the community—that is a part of our democracy.

"I could do without a radio, but I wouldn't be much of a citizen or of much help to the community, if I didn't know what was going on. I could get along without an automobile—we used to when I was a kid, but if I didn't have a car now, every time I wanted to have a plow point sharpened or to get a repair part for some of the machinery, I would have to get a ride into town from one of the neighbors."

Plagge owns no land in Baca County (a reason for coming was to buy a farm), but his roots are deep in his community. He does not expect to leave:

"Somebody's got to live here. We have a lot of friends here and we are very interested in the Grange and the 4–H Club work and our soil conservation district. It took me 11 years to learn how to farm in this county. If I move to a new country, I will have to learn new methods again."



Books

GOOD COUNTRY

By Lewis T. Nordyke

A MAN WHO had been on the Texas plains when the few settlers lived in dug-outs was back in east Texas, and the people there wanted to know about "that Panhandle place."

"It's good country," he told them. "It's good country."

The waves of migration to the West more than half a century ago were inspired by the never-ceasing search for good country. That search for homesteads in good country was the major factor in the development of our western plains regions. But our literature, except in a few cases, has failed to capture that important element.

The operator of a sweets shop between two big movie houses in Dallas wrote a book titled *Cowboy Lingo*. It was distributed under the imprint of a leading book maker, and it was a best seller. The book, which covered well the salt of cowboy language, was along the line of the vast majority of writings about the cow country. We have only to recall a few western titles—*Saga of Billy the Kid, Fighting Men of the West, Hot Iron, The Heraldry of the Range*—to realize the factors with which most writers have concerned themselves.

The six-gun, the saloon brawl, the boothill graveyards, dance hall girls, cattle rustlers, stampedes and other things on the glamor, romantic, and danger side have dominated western literature, particularly that of Texas. And the real, down-to-earth novel with the good country soul has not been written. Perhaps it will be developed before long, for there is a growing tendency toward love of the dirt. After all, we may come to realize that hot lead and bad whiskey didn't establish peace, order, and growth on the plains, that saloon brawls and dance hall girls didn't establish the homes that dot the plains.

Writings about the Great Plains fall into several divisions. We have, of course, the Spanish background—Coronado and the other explorers and their influences; the westward migration, mainly about the Santa Fe trail, the colorful guides of the Kit Carson sort; cowboys and bad men, and trail driving; the Indians and Indian wars; and biographies and autobiographies of the old-timers.

These works are very valuable. Andy Adams, an old trail-driver himself, was one of the best early-day writers of cow country stories. His *Log of a Cowboy* is the classic trail-driving story. Charles Siringo was another. His *Riata and Spurs* and other stories are important western literature.

J. Evetts Haley's *Charles Goodnight, Cowman and Plainsman* is among the leading biographies of plainsmen. His story of the XIT ranch, although slightly one-sided in favor of the owners of the big ranch (who employed Haley to write the book), is a thrilling story of the era of development, and, to a degree, the British influence in the development of the plains cow country.

But even in these fine examples of plains literature we find the ever-present cow and cowboy. That is true, too, even in the fine history of the plains Walter P. Webb wrote.

One of the latest among the excellent plains stories is *The Trampling Herd,* by Paul I. Wellman, of Kansas City. He covers well the cow era in the plains country and the terminus of the cattle trails—Kansas. Another recent novel—and, incidentally, one that comes close to the good country spirit, is *The Mother of the Smiths,* by Lorraine Carr, a Texas writer who moved to Taos and chronicled life in the valley.

The present trend seems to be toward the land. The dust menace and the battle against wind erosion seem to have kindled a deep-seated appreciation for the dirt. Probably the romantic cowboy will always ride and shoot through our western plains' literature—but he likely will have to share the good things of life with characters rooted in the soil just as he did when the settlers came looking for good country.

For your attention

SOME GOVERNMENT PUBLICATIONS ABOUT THE SOUTHERN GREAT PLAINS

By ELSIE MARCLEY

COUNTY AGRICULTURAL PLANNING REPORT FOR THE TEN COUNTY AREA IN THE NORTHWEST TEXAS PANHANDLE. Mimeographed report prepared by the Texas Extension Service and the Department of Agriculture. College Station, Texas. April 1938.

A summary of recommendations made by county planning committees in 10 counties of the Texas Panhandle—Lipscomb, Ochiltree, Hansford, Hutchinson, Moore, Sherman, Dallam, Hartley, Oldham, Deaf Smith.

COUNTY PROBLEM ANALYSIS OF THE SOUTHERN GREAT PLAINS REGION, KANS. C. R. Jaccard and Roger Stewart. Mimeographed report prepared by the Kansas Extension Service and Bureau of Agricultural Economics. Manhattan, Kansas. 1937.

Analysis made by the county planning committees of problems of the Southern Great Plains counties of Kansas and suggestions for correcting them.

THE DUST BOWL: AGRICULTURAL PROBLEMS AND SOLUTIONS. United States Department of Agriculture Editorial Reference Series: No. 7. Mimeographed. Prepared by Office of Land Use Coordination. July 15, 1940.

"A factual description of the changes in agriculture and the development of agricultural problems in the area now called the Dust Bowl, together with a description and evaluation of certain programs which work toward a solution of these problems."

DUST-BOWL EXPERIENCE WITH STRIP-CROPPING R. R. Hinde. Soil Conservation magazine. October 1938.

Tells results obtained from strip-cropping in the Southern Great Plains and how this practice may be used with different crops.

DUSTSTORMS IN THE SOUTHWESTERN PLAINS AREA. H. F. Choun. United States Monthly Weather Review. June 1936.

Verifies the severity of soil erosion due to wind and suggests selective tilling of some of the area with use of the remainder for grazing purposes; gives tabular data on duststorms at Amarillo, Tex., during 1933, 1934, 1935, and 1936.

ECONOMIC UNITS FOR THE DUST BOWL. W. R. Watson. Soil conservation magazine. September 1938.

An explanation of the unit-reorganization program in the Southern Great Plains, which enables farmers to operate units of sufficient size to have diversified farming that will make them self-sufficient.

FARM POPULATION MOBILITY IN THE SOUTHERN GREAT PLAINS. Olaf F. Larson. Reprinted from Social Forces. May 1940.

A brief review of recent changes in farm population of the Southern Great Plains and some phases of the movement from farms during the drought years.

FARMING HAZARDS IN THE DROUGHT AREA. R. S. Kifer and H. L. Stewart. Works Projects Administration Research Monograph XVI. Government Printing Office. 1938. pp. 41–119.

Situation of farmers and their problems after the 1934 drought and prospects for rehabilitation.

FSA CONTRIBUTES TO LIFE IN THE SOUTHWEST. Printed without cost to the Government by employees of the Farm Security Administration in Texas, Oklahoma, New Mexico, Colorado, and Kansas. Amarillo, Tex. 1940.

A pictorial presentation of the problem of people in the Southern Great Plains and the methods being used by Farm Security Administration to rehabilitate them.

THE FUTURE OF THE GREAT PLAINS. United States Government Printing Office. 1937.

Report of the President's Great Plains Committee presenting the problem brought about by an agricultural economy not adapted to the climatic conditions of the Great Plains and accentuated by drought and economic depression, and suggesting adjustments to be made.

GRASS CULTURE AND RANGE IMPROVEMENT IN THE CENTRAL AND SOUTHERN GREAT PLAINS. D. A. Savage. United States Department of Agriculture Circular No. 491. Government Printing Office. 1939.

A presentation of information on reestablishing pasture grasses on cultivated land and restoration of grasses on depleted pastures.

Land Facts on the Southern Plains. Glenn K. Rule. Miscellaneous Publication No. 334. Government Printing Office. 1939.

A brief statement based on the problem area map of the Southern Great Plains of the physical conditions, complex problems, and desirable adjustments in land use.

Possibilities of Shelterbelt Planting in the Plains Region. Prepared by the Plains Shelterbelt Project, United States Forest Service. Government Printing Office. 1935.

"A study of tree planting for protective and ameliorative purposes as recently begun in the Shelterbelt Zone of North and South Dakota, Nebraska, Kansas, Oklahoma, and Texas by the Forest Service; together with information as to climate, soils, and other conditions affecting land use and tree growth in the region."

Preventing Soil Blowing on the Southern Great Plains. E. F. Chilcott. United States Department of Agriculture Farmers' Bulletin No. 1771. Government Printing Office. 1937.

A description of implements and methods of cultivation that will prevent soil blowing.

Problem-Area Groups of Land in the Southern Great Plains. H. H. Finnell. Government Printing Office. 1939.

Map and description of 10 problem-area groups of land in the Southern Great Plains based on physical factors.

Report of Land Retirement Operations in Southern Great Plains. H. H. Finnell. Soil Conservation magazine. April 1939.

A brief summary of the land-retirement experience in the Southern Great Plains demonstration areas of the Soil Conservation Service.

Sand-Dune Reclamation in the Southern Great Plains. Charles J. Whitfield and John A. Perrin. United States Department of Agriculture Farmers' Bulletin No. 1825. Government Printing Office. 1939.

Description of methods for stabilizing sand dunes and making them eventually useful for grazing and cultivation studied on 2,000 acres of sand-dune land in Dallam County, Tex., 8 miles north of Dalhart, Tex.

Social Problems of the Drought Area. Works Progress Administration Research Bulletin, Series V, No. 1, 2, and 3. Government Printing Office. 1937.

Description of areas of intense drought distress, 1930–1936 and its effect on crop and pasture conditions; description of present population of the Great Plains, history of settlement, and population changes; and a study of Federal relief programs and rehabilitation in the drought area.

Soil Conservation Reconnaissance Survey of the Southern Great Plains Wind-Erosion Area. Arthur H. Joel. Technical Bulletin No. 556. Government Printing Office. 1937.

Survey of 20 counties in the heart of the "Dust Bowl," the bulletin accompanied by maps of each county.

Risky

The Great Plains can be made a dependable source of a large portion of our essential food supply. Investments in their development can be rescued from uncertainty and under proper conditions new investments can be made securely. The plains can be transformed from a risky adventure and a recurrent liability into a stable basis of economic and social profit to their inhabitants and to the whole country.

—THE FUTURE OF THE GREAT PLAINS

Land policy REVIEW

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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ECONOMICS

Editorial Notes *and* EXPRESSIONS

CONTRIBUTORS TO THIS ISSUE: The Bureau of Agricultural Economics is represented by **O. C. Stine**, head agricultural economist in charge of the division of statistical and historical research; **Frederick V. Waugh**, chief agricultural economist in charge of the division of marketing and transportation research; **J. C. Ellickson** and **Bela Gold**, social science analysts in the division of program surveys; **Wilhelm Anderson**, on the staff of the planning procedure and coordination section; **Homer L. Hitt** and **Helen W. Johnson**, social scientists in the division of farm population and rural welfare.

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R. W. **Hudgens** is the assistant administrator of the Farm Security Administration. His article is one of several, projected or already published, about FSA's success with cooperatives.

BOOK REVIEWS ARE by **John Dreier**, former editor of Land Policy Review and now a member of the cooperative relations section of the Soil Conservation Service; **Monroe Oppenheimer**, chief of the farm security division of the Office of the Solicitor, Mr. Gold, and Mr. Hitt.

FORTHCOMING ARTICLES include another discussion of the Ejido cooperative by Arturo Gaona, officer of the Ejidal bank; an explanation of agricultural control in Germany by G. P. Boals of the Office of Foreign Agricultural Relations, and a discussion of rural land holdings in South Carolina, by G. H. Aull, head of the department of agricultural economics and rural sociology, the Clemson Agricultural College, Clemson, S. C.

TWO CONTRIBUTORS, Drs. Waugh and Stine, consider aspects of war and defense. Several articles of like import are planned for later numbers as being of vital interest to American farmers.

A NEW LEAFLET that tries to answer contributors' most frequent questions about Land Policy Review can be had by addressing the Divisic of Economic Information, Bureau of Agricultural Economics.

LAND · POLICY · REVIEW

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1917-1918: Lessons for a LATER DAY

By O. C. STINE. *The time between August 1917 and the Armistice was a period of rising prices, heavy demands for our farm products, signs of profiteering, control of food and fuel, and our first big experiment in price fixing. How our agriculture functioned under this control, how it was instituted, what it accomplished, and what was thought of it at the time are discussed in this article, the first of two by Dr. Stine.*

THE STORY of American agriculture and the last World War has been told many times, yet almost invariably with emphasis on the farm conditions that followed it—overexpansion into submarginal land, lost foreign markets, and other problems that have persisted into our own time.

But these things were results—not causes. Granted that this overproduction came about through our successful efforts to supply the Allies with food, what methods did we use to grow and transport this supply, and how much did these methods affect the aftermath? Were the postwar American agricultural conditions an inevitable corollary of our war efforts, or could those conditions have been avoided or at least mitigated?

In this connection—that is, in connection with the methods used—the first point to take into account is that the handling of American agriculture during the war constituted this country's first major experiment in price control.

The phase of price control that concerned agriculture was handled by the United States Food Administration. It lasted 14 months—from August 1917 to the signing of the armistice.

It was a breaking with all precedent. During the Civil War staple quotations more than doubled, yet the Government laid no hand on prices. Not even during the sharp rise of 1916, provoked by European war buying, did the Government take action.

Fear, and Then the Need to Furnish Supplies

Rising food prices had become a matter of some concern in the industrial centers of the United States, even before the outbreak of the European war. Prices turned upward in the nineties, after a long period of decline following the Civil War, and by 1910 had advanced far enough to develop considerable concern over the rising cost of living, and to stimulate back-to-the-farm movements. The advance had begun to stimulate production at the outbreak of the European war. War conditions increased the foreign demand for foods, and prices had gone up sharply before the United States entered the War in 1917.

When the United States finally declared war, it became vitally concerned not only with its own supplies but also with providing adequate supplies for the Allies. To the Food Administration, in fact, this providing of supplies to the Allies was of equal—or greater—importance than the regulation of prices for the prevention of speculation and the protection of the consumer. Paul Willard Garrett in a survey of conditions leading to Government control over prices observes that by May 1917 the food situation in this country had become precarious.

Heavy and uncontrolled demand by the Allies and the neutral countries was rapidly drawing food supplies out of this country and prices were rising sharply with demoralization of the market evident in many quarters. Between March and July 1917 the food-group index swung upward from 142 to 167. No. 1 Northern Spring wheat shot from $1.98 per bushel to $2.58 per bushel in that period.

No Government interference was provoked by these rises until after our entrance into the war. And the further rises stimulated immediately by this entrance were serious largely because they came after prices already had reached extraordinary heights.

Frenzy of Buying Sends Prices Upward

Further price rises also were threatened for a variety of reasons. One of the most important of these was in wheat. In the spring of 1917 the United States became the mecca of the Allied wheat buyers. The largest sales, both for cash and future delivery, were made to the European governments. Yet to meet these abnormal European demands, America had the smallest wheat crop since 1911. As a result, shortly after we entered the war, a frenzy of buying seized the country's wheat markets and sent the prices violently upward.

Sugar exports from this country mounted from 96,862,462 pounds in the year prior to the European war to the extraordinary figure of 1,685,195,537 pounds in 1916. Sugar prices were forced upward by this drain on Cuban and American stocks, until finally the Government was forced to intervene.

After our entry into the war, the desire of the Government to make its own enormous purchases at reasonable costs might have had a much more disastrous effect upon prices generally than appears upon the surface. The taking of a huge quanti of any material by the Government at a fixed low figure would not of itself hold prices to the public at the same figure. In fact, civilian competition for the residue stock probably would force open-market prices even higher, in the opinion of many persons. Accordingly, the President, in 1917, declared for a single price to the Government, the public, and the Allies.

For a time the wartime rise in the price of staples was tolerated without much complaint by the labor and middle classes, since with these increased prices there came a somewhat increased prosperity. However, after mobilization began over here, a general discontent developed, largely due to the fact that prices were mounting, while mobilization began reducing thousands of family budgets by taking men into camps. Signs of profiteering appeared at every turn during the spring of 1917, and bitterness began to rise.

Mounting Costs, Lower Budgets, Profiteering

The President appointed Herbert Hoover as Food Administrator of the United States on May 17, 1917. Pending authority from the Congress he laid the plans for a food-control law, built up a staff of more than 450 persons, outlined his policies, and set forth to the country at large the necessity of food control. Furthermore, in this period before the Congress acted, more than 100 conferences were held with the trade, important informal agreements reached, and contacts cemented that determined the later courses of action.

Although they advised and consulted with one another, the work of the Department of Agriculture and the Food Administration fell into distinct categories. The former's interest lay in the stimulation of the production of food, which it carried on under authority of the Food Production Bill (passed the same day as the Food Control Bill) while the latter handled the food after it had been produced.

As Secretary of Agriculture Houston expressed it in his annual report for 1917: "In the main the Department of Agriculture deals with all the processes of farming and follows the products through the markets to the point where they are available, and are in requisite form, for consumption. It aids in these processes through investigation, advice, and demonstration; only in the case of certain products and processes has it regulatory authority. The Food Administration, however, has wide powers of regulation and direction of food materials and food products."

The regular agricultural agencies in the country, in fact, had been and were to continue to be extremely active in the war agricultural program.

Organization, Coordination of Farm Activities

Pending action by Congress, the Federal Department of Agriculture, the State departments, the land-grant colleges and other agencies began active work on the immediate job. In cooperation with farmers' organizations throughout the Nation, they strove for better organization and coordination of the Nation's agricultural activities.

In each State, in connection with the State council of safety, the organization of a small central division of food production and conservation composed of representatives of the State board of agriculture, of the land-grant colleges, of farmers' organizations, and of business agencies was promoted.

The primary purpose of this work was to increase the production and conservation of food supplies and to promote more orderly and economical marketing.

Mr. Hoover impressed the country with the belief that the Allies were in more immediate need of food than of men, and that the shortage of ships made it expedient that this food come largely from North America, since shipments from Australia or Argentina would require two and three times as much tonnage, respectively, to haul an equal amount.

It was estimated further that the Allies would need perhaps 500,000,000 bushels of wheat beyond their own crops for the next year, and close to 1,000,000,000 bushels of all cereals; and that there was prevalent a speculation in wheat,prompted by bidding for the residue available for export, which already had boosted the price of flour from $9 to $15 a barrel. All these facts were told the country in a straight-forward manner, and acted as a leaven preparing the way for Government control.

Appeals to Patriotism in Alert Publicity

In this connection, it should not be overlooked that the never-slackening publicity of the Food Administration, appealing mainly to the patriotism of the people, was one of the most potent of all the factors leading to the carrying out of the program. No housewife, grocer, manufacturer, or miller was left in any ignorance of the war measures upon which the Administration wanted vigorous cooperation. And after the policies of the Administration were in full force, local organizations of all kinds and local newspapers were quick to denounce violations.

Debates on the Food Bill began immediately after its introduction in Congress on June 11, and dragged on for 2 months. However pressing the situation, especially in regard to wheat and sugar, the protracted hearings and discussions during the summer did teach the Government and the country much about their problem.

The bill was finally made into the Food Control Act on August 10, 1917. This act set forth the basis of all later food control, granted wide powers to the President under which he created the Food Administration, and fixed a minimum price for wheat. In effect, it served to give legal status to all that Mr. Hoover had done in Washington of an informal character in the 3 months previous.

Although scores of amendments were proposed at the Capitol, some of which were written into the bill and gave it a different character, essentially the law as signed by the President set up the kind of control for which he and Mr. Hoover had long been asking.

It is noteworthy, however, that this act, the one broad grant of regulatory powers over prices made by the Congress, gave power simply to the President, and made no mention of either a Food Administrator or a Fuel Administrator. It permitted the President to control foods and fuels, and he, of his own accord, appointed to represent him a Food A ministrator and a Fuel Administrator. These latter, in turn, set up huge organizations as their tools of administration.

The Food Control Act, sometimes called the Food and Fuel Control Act, was "the most important measure for controlling prices which the United States took during the war or ever had taken. It was the basis for the whole of wartime control of food and fuel as well."

As originally drawn, the bill contained provisions for the fixing of both maximum and minimum prices. These were struck out, perhaps because of a feeling on the part of the committee that such plans had been unsuccessful in European countries. As finally drawn, however, the bill provided for a control that would have been hard to make more sweeping. The terminology of the act itself, in its declaration of purposes, amply demonstrates this:

". . . to assure an adequate supply and equitable distribution, and to facilitate the movement, of foods, feeds, fuel, including fuel oil and natural gas, and fertilizer and fertilizer ingredients, tools, utensils, implements, machinery, and equipment required for the actual production of foods, feeds, and fuel, hereafter in this act called necessaries; to prevent, locally or generally, scarcity, monopolization, hoarding, injurious speculation, manipulations, and private controls affecting such supply, distribution, and movement; and to establish and maintain governmental control of such necessaries during the war . . ."

The President was authorized to issue any regulations or orders necessary to carry out these provisions. The purposes of Congress were made even more definite by declaring unlawful certain specific acts—a list which comprehended very nearly all private abuses pertinent to the wartime food problem.

The License System—Backbone of the Bill

The outstanding feature of the whole act was the kind of control by which it proposed to accomplish its ends.

Congress apparently felt that the domestic situation lent itself more readily to a system of license control over the manufacture and distribution of foods than to a system either of fixed or minimum prices. It was felt that the transition to a wartime basis should be made more gradual than either of the latter alternatives would permit. As a corollary, it was believed that the patriotism of the people could be relied upon to carry through the less rigid program of control.

Other features of especial note in the act were the powers which it delegated to the President to requisition "necessaries"; to purchase or store wheat, flour, meal, beans, and potatoes; to take over for use or operation by the Government factories or plants manufacturing "necessaries"; to regulate or prohibit operations of exchanges and boards of trade; to commandeer distilled spirits; and to fix the prices of coal and coke. It was this law also which guaranteed a minimum price of $2 per bushel for wheat, binding until May 1919, and provided that the President might fix a higher price at his discretion.

The backbone of all these provisions—and of the administration of wartime control over foods—lay in the license system and the many rules and regulations which were imposed upon all who came under it. With the exception of wheat, the law itself set up control over no particular commodity. It merely gave the President the power from time to time to issue proclamations and to bring under license control dealers in those commodities which he and the Food Administrator wanted to regulate.

Farm and Garden Producers Exempt

In different proclamations made by the President between August 10, 1917, and the close of the war, he declared that dealers in foodstuffs specified must secure a license from the Food Administrator before doing further business.

By all odds the most important of these proclamations was that of October 8, 1917, which called in substance for the licensing of every dealer in any staple food commodity. It provided for the licensing of manufacturers and distributors of wheat, rye, barley, flours, oats, oatmeal, corn, lard, milk, butter, cheese, beef, pork, mutton, poultry, eggs, fish, fruits, vegetables, canned goods, dried fruits, and sugar. Proclamation by proclamation, the list of dealers from whom licenses were required was extended, until at the end virtually the whole food group was under license control.

Discretion left to the administrators by the act was enormous.

In no sense did the law tie their hands in respect to the determination of the foods that might be brought under license control. They had power to control any and all foods or feeds—and there were few dealers in those foods or feeds whom they might not bring under license control. The substance of the law was that all persons engaged in the importation, manufacture, storage, mining or distribution of any "necessaries" might be licensed. To this general rule, however, two important exceptions may be noted. The law specifically exempted from license control all farm and garden producers and all retailers whose gross annual sales fell below $100,000.

Quite apart from any regulations which the Food Administration might later set up under the statute, there were put into the act itself some very stringent enforcement clauses.

Fines, Threats, Fixed Prices, and Patriotism

Contained in it was the threat of a fine of $5,000 or $10,000 against violators of nearly every section in the law, or imprisonment for not more than 4 or 5 years. There was, moreover, written into the law an authorization for the President to requisition foods, and another for him to make purchases. However little these last powers may have been used, they stood always as effective potential instruments.

Another section of the act that deserves note is that which fixed the price of wheat. It represented a distinct break in policy with the rest of the act, since not only was wheat the only commodity for which the law fixed a price, it was also the only food commodity for which the law specifically stated that a price might be fixed. A definite guarantee of $2 per bushel for all No. 1 Northern Spring wheat, at Chicago, was made for deliveries up to May 1, 1919.

The prices of equivalent wheats or other standard grades at variou markets were to be figured, upon that scale, by the official grain standards established under the United States grain-standards act. While the President was not permitted to set aside this guaranteed minimum price, he was given the power to increase it from time to time to encourage production.

All had not been smooth sailing in the passing of the act. During the 2 months of the debate many voices were raised against the whole idea of food control, declaring that it was an autocratic imposition on the American public. Joseph C. Bartley, in his "Study of Price Control by the United States Food Administration," cites Senators Gore and Lodge, Congressman Young, and the New York Evening Sun as representative of those who attacked it bitterly.

To Anticipate and Prevent Food Shortage

At the outset of his administration Mr. Hoover set forth the policies of control for which he intended to work and the general organization plans by which he hoped to secure them.

As early as the spring of 1917 he gave out again and again statements that, in his opinion, food control fell into four great branches: First, the control of exports; second, the setting up of instrumentalities to regulate or do away with speculation; third, the mobilization of the women and men of the country engaged in personal distribution of foods as actual members of the Food Administration to carry out national conservation; and, fourth, the erection in every State of a Federal-State food administration and the decentralization so far as possible of functions into State administrations.

In the last analysis, the problem of the Food Administration might be stated as being the anticipation and prevention of a world-wide food shortage. The scope of its work, plus rising prices, soon forced it to set up affiliated boards to help control the food market more rigidly. On October 24, 1917, the Division of Coordination of Purchase was set up. This division, which later came to supervise Government and allied purchases of foodstuffs aggregating $200,000,000 per month and more, was created as an advisory unit through which all war food purchases might clear.

It was arranged between the Allies and our Government that all allied food requirements (except grains, flour, and meal) should be submitted to a so-called allied provisions export commission, which in turn was to give notice of those requirements to the Food Administrator. The Division of Coordination of Purchase, upon receiving this notice, advised what method of purchase should be adopted in order least to disturb the market. That is, those food requirements were either allocated to the industry under approval of the Food Administration, or allowed to be made by the purchaser in the open market. A Food Purchase Board was created in November 1917 to bring a like coordination to all food purchases of the Army and Navy.

With its policies formulated, and with authority now granted it under the Food Control Act, the Administration proceeded at once to its work.

Exports: DOWN *Marketing Plans:* UP

By FREDERICK V. WAUGH. *A pioneer in the theory of the Food Stamp Plan examines here the important subject of domestic surplus disposal plans in relation to farm income. The article is especially timely in view of our declining farm exports. The reader is referred to two other works by Dr. Waugh: "The Controlled Distribution of a Crop among Independent Markets" (with Edgar L. Burtis and A. F. Wolf) in The Quarterly Journal of Economics, November 1936, and "Market Prorates and Social Welfare" in the Journal of Farm Economics, May 1938.*

THE WAR has practically cut off exports of American farm products. This situation greatly aggravates the problem of agricultural surpluses in this country. Even when we had fairly satisfactory export outlets it was difficult to move agricultural goods into consumption at prices that would give farmers adequate incomes and satisfactory standards of living. Now that our export markets are nearly gone, the problem of disposing of surpluses has become even more acute.

In normal times one way of getting rid of these excess commodities would be by some form of export dumping. If we could sell some of them in foreign countries at any price we might be able to maintain prices of farm products in our own markets at fairly satisfactory levels. Some surpluses have been sold abroad during the past few years by means of export subsidies. This is one form of dumping.

But such a program has become in practice impossible, and it is doubtful whether the United States will be able to dump any considerable quantities of food in other countries during the next few years, even if large subsidies are provided. One possible exception to this might be some arrangement whereby our surpluses might be made available to the distressed civilian populations in war-torn parts of Europe and Asia. But here again the prospects do not appear bright.

Thus, agriculture is being driven to giving increased attention to the possibilities of developing various kinds of domestic surplus disposal schemes, like the Food Stamp Plan.

the Direct Purchase and Distribution Program, the Low-Cost Milk schemes, the School Lunch Program, the Cotton Stamp Plan, and the Cotton Mattress Program. Farmers naturally are asking to what extent programs of this kind will take care of agricultural surpluses and how effective they are likely to be in raising farm income.

Income and Surplus Disposal Programs

The Food Stamp Plan and some of the others have been popular with the consuming public and farmers, but it is likely that neither the consumer nor the farmer understands very well how these plans affect farmers' incomes.

Even some economists have contended that although these plans were of great benefit to low-income consumers, the farmer would get only a small portion of whatever subsidy is extended by the Government; yet a forthcoming report by the Bureau of Agricultural Economics, *An Economic Analysis of the Food Stamp Plan,* shows that farm income is likely to be increased by the full amount of the blue stamp subsidy and perhaps more.

Similar results may be possible from some of the other surplus disposal schemes.

The plans grew largely out of studies made by the Bureau of Agricultural Economics. In 1934 an investigation dealt with the economic possibilities of marketing agreements. The studies indicated the need for some modifications in the details of particular marketing agreements, and suggested several possibilities of raising farm income by different forms of "domestic dumping."

Dumping and Segregating Domestic Surpluses

It has long been recognized that under certain conditions farm income might be raised by export dumping, but it has not been so commonly understood that there are similar possibilities for segregating part or all of our surpluses and selling them in this country at less than the regular market price.

Any scheme that segregates the surplus will tend to strengthen and stabilize the market price obtainable for the rest of the supply. For example, when the surplus can be segregated and shipped to foreign markets, the price in the domestic market is raised. Similarly, when the surplus is set apart and sold to low-income groups at home, the regular market prices for agricultural products are increased. The surplus disposal schemes are not likely to handle any very large percentage of the total agricultural production—say, at the most, something like 10 percent. Even a very slight rise in the price of the remaining 90 percent will mean a substantial increase in incomes received by farmers.

Until recently, at least, all the plans have been so small that the price effects in the regular market have not been very noticeable. But as these programs increase they will have more and more effect on market prices and on farm income.

Factors Affecting Farmers' Income

Accurate estimates of increases in farm income are difficult without further research on consumer demand. Pending this, about all we can do is to consider carefully several factors that will affect farm income under the plan.

The first of these is the amount of surplus commodities that are segregated from the rest of the market and made available to low-income people. The amount depends on the amount of money provided by the Government and the proportion of such sums that are used to pay for processing and distribution.

One of the main arguments for the Direct Purchase and Distribution Program (as compared with the Stamp Plan and similar schemes) is that much of the Government subsidy is used to buy agricultural products at or near the farm. In the case of the Stamp Plan, for example, the food products are bought at retail.

The BAE studies show that a subsidy of a million dollars for the Stamp Plan will buy somewhat less food than the same subsidy spent for the Direct Purchase and Distribution Program.

Improving Diets and Increasing Amounts of Food

The second important consideration is the amount of "substitution" by the consumer. The farmer will get little or no benefit from any of these schemes unless the low-income families participating in the plan do actually increase the amount of food they consume. If they simply substitute the surplus products for foods they would have bought otherwise, they are neither improving their diets nor are they contributing to the solution of the surplus problem. It is here that the Food Stamp Plan has real merit.

Most participating families are required to buy with their own money substantial amounts of orange-colored stamps before they are given any of the free blue stamps. The orange-stamp requirement has been adjusted rather carefully in order to insure that participating families continue to spend approximately as much cash for foods as they did before the plan.

If this were done perfectly, the blue-stamp purchases would be entirely net increases in consumption over and above what these families would have obtained without the Stamp Plan. Probably the orange-stamp requirement does not completely prevent substitution and therefore the net increases in consumption are probably somewhat less than the total value of the blue stamps issued by the Government. Nevertheless, increase in the amounts spent for food under the Stamp Plan is probably almost as large as the Government subsidy.

The third important factor is the elasticity of demand for foods in the regular market. If this demand is inelastic, a slight reduction in the quantity sold in the regular market will raise the total value of the crop.

For example, a decrease of 1 percent in the supplies moving through these markets would bring about more than a 1 percent increase in price. For this purpose the studies already made are probably accurate enough to indicate that the demand for most foods is inelastic, at least when expressed in terms of farm prices; that is, farm income is usually increased when food supplies are reduced.

The Plans Have Not Raised Marketing Costs

Thus, if there were no substitution and if the demand in the regular market were inelastic, the total expenditures of consumers for a crop of a given size would be raised by more than the amount of the subsidy.

For the sake of simplicity we are discussing here only the situation where the whole crop would be marketed without any surplus disposal schemes. If part of the crop otherwise would rot on the farm, and if the main effect of surplus disposal is to move this part into consumption, the situation is, of course, considerably different.

Farm income would also be raised by more than the amount of the subsidy, unless the total cost of processing, transporting, and marketing foods were increased.

Of course, some slight increases in these costs might follow any considerable increase in the price of food, but so far, at least, none of these plans seems to have raised marketing costs. On the other hand, some of the surplus disposal programs have definitely lowered these costs. This is particularly true of the low-priced milk schemes.

A unique feature of these devices is that only a small Government subsidy is required, since the dairy farmer contributes by accepting a lower price for relief milk and the distributor contributes by substantial reductions in marketing charges. These reductions in charges are made possible by eliminating many expensive services.

Although these surplus disposal programs have now developed beyond what usually is called the experimental stage, there is still plenty of opportunity to make any changes that are likely to be of benefit either to the consumer or to the farmer. It seems certain that as these plans develop they will add substantially to farm income.

Many things appear to be inevitable, and with the inevitable we must work. Cities will continue to grow; electricity will make it possible to remove many of the worst offenses against the esthetic sense; motor roads, released from the cramping limits of steel rails, will spread in every direction, bringing the city and country closer together; urban centers will expand into urban regions, breaking down for millions the old antithesis between town and country; city planning, having grown into regional planning, will be merged into state and national planning, with technology as its basis.

—Charles A. Beard

Bright Young Men WHISTLE IN THE WIND

By J. ALFRED HALL. *In this challenging discussion, addressed primarily to men in the Forest Service, a veteran forester describes the maladjustment of a large group in "submarginal" areas of the Central States. Much can be done, he says, "but it will require more than bulletins or radio speeches, or bright young men to make farm plans and run contours."*

I WANT to take up the general problem of land use and people in that broad zone of the Central States usually referred to as "submarginal for agriculture," the rugged hill lands of southeastern Ohio, southern Indiana, Illinois, the Ozarks, the Cumberland Plateau, the Highland Rim of Tennessee, the Horseshoe Rim of Kentucky, and the western Kentucky coal fields.

In all of this territory there are certain patterns of land use and land abuse that are general. In a great deal of it mineral resources give some small employment to a part of the resident population. In most cases, however, I find that this type of employment meets the requirements for only from 5 to 10 percent of rural dwellers. If there is any part of the United States in which rural poverty at its worst and the consequent destruction of land values are more clearly shown, I do not know of it. It seems to me that there is considerable room for some thought with regard to these territories, at least more thought and clearer thought than most that has come to my attention.

So far, I get the impression that such country is a sort of no man's land in general economic thought. Most planning deals with pretty good agricultural land. So far, at least to my knowledge, nobody has had the nerve to face the issue of exactly who are really farmers and who are merely occupiers of small pieces of submarginal land. I submit that there should be some subdivision of this broad category "farmers" and that the attack, the programs, the economies of all farmers are not to be classed broadly together in planning.

This matter of definition is not one merely of setting up bureau responsibilities; it carries with it the actual designing and execution of programs that mean everything to millions of very poor people.

There is no uniform pattern of rural poverty. In many territories it may be definitely ascribed to absentee landlordism, sharecropping, or other evils that exist even on excellent agricultural lands. Rural poverty in the hill lands arises mostly from the low productivity of the very small amount of plow land, and the terrific maladjustment of population to the economic base. There are no real comparisons possible between the two general types of economies. In Arkansas, the sharecropper may occupy good land, owning nothing, living in abject poverty. In the hills, ownership and hard labor bring no returns but miserable living and hardships.

Varying Patterns of Rural Poverty

The first kind of rural poverty could perhaps be partly corrected by social legislation dealing with land ownership, tenants' rights, rentals, credits, and the like, if and when government can be brought to face the issues squarely. There are no such solutions for the poverty of the hills. There the economic base is lacking, and that which exists is being destroyed.

Comparison between the hill "farms" and Corn Belt farms leads to greater absurdities. The typical Corn Belt farmer owns or rents 120 acres of land, most of it arable and productive. He may be head over heels in debt or deliver most of his crop to the landlord; but he is still infinitely better off than the hill man. He has enough left to eat; his scale of living, opportunities for life on a full scale, are so far above those in the hills that to class all together as just "farmers" appeals to me as being nonsensical.

The point is this: The economy of Corn Belt agriculture, poorly adjusted though it may be, is potentially an economy in which the resident population can prosper and lead complete lives. The economy of the hills is a limited one, overcrowded, continually pressing against its limits, spewing out surplus population, feeding the relief rolls, and consuming its own limited economic base.

Small Holdings, Poor Equipment, Hard Work

The small landowner in the hills has perhaps 100 acres of land. It is an anomaly that land ownerships are smaller in these submarginal territories. Only 10 acres may lie well to plow, and that is cultivated crudely; one horse and a "jumping shovel" may be the only equipment. The family works from morning until night with hoe and hands, growing a meager crop.

The other 90 acres are steep. A patch is cleared and broken. A crop or two can be gathered before erosion has taken such a toll that cultivation must be moved to a new patch, newly cleared. This is not virgin forest being destroyed; it is second or third growth that has come in on fields long abandoned for agriculture. The whole process is obviously leading to disaster, but what can the owner do? He must live and support his family. This land is all he has. His unremitting toil plus slim grazing obtained by a few cattle in his own woods pasture or on "open range" must give him all his livelihood.

I submit that preaching to that man is like whistling into a hurricane. Hunger drives him to exploit the land. Terrace farming? He cannot afford to spend a nickel. Lime? What could he use for money? Soil-conserving crops? This man raises things to eat and trade for a few necessities. Soil conservation has no signficance to him; he must rob the land in order to live.

He regards the forest as his enemy. He fights it with fire and axe because it returns him no apparent value and prevents plowing. His tradition is all agrarian, yet he occupies a land not fit for agriculture. He knows nothing but tilling the soil. Yet, to far too many people these are all "farmers."

Not by Bulletins or Bright Young Men

Everything in the Ohio Valley is not plow land. Does the existence of 45,000,000 acres of forest lands in the Central States, most of it outside the Corn Belt, mean nothing?

I'd like to see a farm plan for this man I've been describing whose total annual income may be less than $150. Relocation failed, and any such plan will fail. These people want to live in the hills. Loans merely perpetuate a bad situation and are not loans anyway; they are merely another form of relief. ACP payments mean nothing to these men. They cannot afford to take land out of production.

The plain truth is that no solution has yet been developed whereby these people can make enough, where they are, to approach the theoretical minimum standard of living as set up about 1933 or 1934 by the Department. But even $400 or $500 a year would be untold affluence. They are thrifty and frugal beyond the comprehension of a Corn Belt farmer. The question then is: Can anything be done to bring their living up to even that low standard? I believe it can, but it will require more than bulletins or radio speeches, or bright young men to make farm plans and run contours.

Hope is Needed, and Good Cooperation

The Forest Service is already in the business to deal with just these lands and these people whether we like it or not. We are buying land in and around these poor hill residents. They are our neighbors and in many cases we are their landlords. We practice "rehabilitation in place" and at least try to fix up a decent place to live. We try with very limited funds to furnish some employment. But at best we can only scratch around on the surface.

What is the job? First, people must be given a little hope, and that can come only through close, direct, and frequent contacts with people whom they trust and who they believe are out to help them.

Our Sublimity project, Cumberland National Forest, Kentucky, shows that when we go into the land-management business we must have agronomists, animal husbandry men, home demonstration agents, and a whole corps of men and women who live with and among these people, working with them day in and day out. I visualize Federal ownership of much wild land, interlaced and interspersed with small areas of plow land occupied by families. It may be that most of this plow land will have to be in Federal ownership because I despair of getting decent land use in these crowded hills by anything short of outright purchase.

As owner, we can defeat abuse by regulation. As benevolent landlord, we can cooperate in teaching, in improving land, in installing permanent works. Left in individual ownership, the small pieces of decent land will be exhausted, the hills burned, and the end is starvation. Under public ownership intensive methods can be developed that will end the pressure on the hillside.

We must move toward highly intensive agriculture. Conversion to grazing means too limited a base.

Farming in this economy will be subsistence farming whether we like the term or not. Our efforts must be bent toward bringing the forest to its full capacity to afford opportunities for labor. From it must flow the cash income to supplement agricultural income. In the long run it may exceed the latter.

The Need for Intensive Agriculture

Development of intensive agriculture in the bottoms, far more intensive than anything that we have hitherto comprehended, will stop the pressure on the hills, the burning of the woods, the deadly downward economic spiral. Work in the woods and on products of the woods will be the best deterrent to fire known and will provide a living. To do the job we will have to have authority to cut, manufacture, and sell, for I do not believe private industry can or ever will do the job. Profits are not the objective. The objective is improving the life of people.

The Forest Service as Management Agency

I have sketched in very broad terms a program that appeals to me as practical—one that envisions the Forest Service in the role of a real land-management agency dealing not only with forest lands and the marketing of timber but with resident families who make their subsistence from small areas of plow land under the control of the Forest Service and derive cash income from labor in the forest and on the products of the forest.

The role of research in the lay-out of such a program is perfectly clear. Intensive forest management, far more intensive than we have visualized, will be needed to provide the required income for the maintenance of these populations. Thoroughgoing and extensive economic studies will have to be made in order properly to design, orient, and plan the lay-outs that are contemplated.

Unfortunately, as far as I am aware, no State in this territory either is in position or of a mind to undertake anything approaching the program that I have outlined. All of this region depends upon State aid for schools, for roads, and Federal relief for existence. I propose the use of sums at least equal to present Federal relief expenditures to build a sound economy that will eventually end relief.

The Ejido at Work

DOWN MEXICO WAY

By GONZALO BLANCO MACIAS. *Here is a story of collective farming in the States of Durango and Coahuila, where bank, farmer, and expert are in partnership. But it is more than a way of helping 32,000 farmers to make a living; it is a significant reform in health, education, and social conditions.*

THE EFFECT of the Mexican revolution did not reach the Laguna district until the presidential decree of October 6, 1936, placed 32,000 farmers of the States of Durango and Coahuila in possession of 395,360 acres of farming land and 573,272 acres of unimproved land. Contrary to some belief, this distribution of land was accomplished with the smallest possible amount of injury to the landholders, who retained most of the better land in the region.

The decree of 1936 in turn derived from an act of Congress of December 2, 1935, authorizing establishment of a National Bank of Ejidal Credit.

This reads, in part, "The credit, as long as it is possible, will be used by the society in a collective way, the latter being managed cooperatively in order to till the lands collectively in those cases in which, due to the intrinsic conditions of the plot, it be deemed economical to do so; or by using, likewise collectively, tools, farm implements, working animals, breeding horses, factories, and plants for the industrialization of farm produce; the societies will also perform a collective storage and sale of the common land produce.

"Furthermore, the credit will be disposed of to get seeds and fertilizers and generally for the acquisition of food, clothing, and housing of the peasants through the organization of cooperatives."

It will be noticed that the act provides both for ejides that work their land collectively and those that, although they also own the land collectively, divide it up and assign each ejidatario, or member, a plot to work. The question whether an ejido is to be of one type or the other is decided by the nature of the region and its agriculture. Since the Laguna region is a natural economic unit, its lands are worked collectively.

It is important to show the collective nature of this effort in the Laguna district, for this common effort is not confined just to the actual working of the fields by the ejidatarios. This spirit of working together extends throughout the whole conception of agrarian reform as it is being made effective in this region. Most phases of the work are under the direction of the bank, and those that are not are conducted in very close cooperation with it.

The agrarian reform is not simply a way to give peasants land and a means of making a living from it. The reform must also improve greatly the health of the peasants; it must greatly extend education; it must even teach the peasants why they must defend the gains they have made. All of these are indispensable, because unless advancement is made in those and other fields, it would not be possible to make an economic success of the redistribution of land. It will therefore be worth while to see how some of these phases operate.

An Understanding of Aims is Required

Now these figures and facts are useful to picture the available facilities, but they are not the most important element. This is the fact that these social services belong to the peasants, and that they feel that they so belong.

For instance, the building of the new hospital at Matamoras was accomplished in large part by the giving of labor by the peasants themselves. This is how they obtained a much better hospital than the Government could have built for them. Only doctors and officers who understood the aims of the reform were sent to work in the Laguna, and hence the peasants' distrust of medicine was early broken down.

The medical service is the peasants'. Every year representatives of the societies of ejidal credit meet to assess the work of the service, and to elect seven officers of the "Peasants' Cooperative for Medical Services." One, the president, supervises finances.

Three others, respectively, are responsible for administrative matters and purchases, for identification of farmers seeking medical care, and for inspection trips continuously through the district.

The remaining three are alternates who can take the place of any of the other four. These representatives of the peasants formulate the budget for the medical services and are consulted in all appointments. Finally, the relationship between the ejidal credit societies and the Department of Public Health of Mexico is formally agreed upon in a document signed by these representatives with the public health authorities.

Of the greatest importance are Coordinated Social Services of Rural Medicine and Hygiene which have their office, concentration hospital, and polyclinic, in Torreon, Coah. The hospital can serve 120 patients. It includes 2 operating rooms, a maternity ward, operation amphitheater, laboratory, X-ray equipment, and other facilities. This hospital and the Torreon clinic are supplemented by 2 peripheric hospitals or clinics, 1 at San Pedro and 1 at Matamoras, and 14 sanitary units and 10 first-aid stations scattered through the district.

How Socialized Medicine Operates

These are of the highest importance in the improvement of health, since neither the concentration hospital nor the 2 peripheric hospitals would be able to serve more than a small percentage of the 160,000 persons in the district.

The sanitary units are located centrally in prescribed zones. They are built in adapted adobe houses that have been repaired. They include a small room for treatments, another for medicines, and a 10-bed maternity ward. An ambulance is attached to each. Ordinarily, 2 doctors, a nurse and an obstetrician make up the staff, and much of their work is done by visits to homes.

The importance of the medical service is shown by the fact that 22,500 cases of digestive ailments traceable to lack of sanitary water were treated last year, and 20,800 cases of ailments due to the dust that is inescapable in field work.

Two things are to be noticed: First, that these facilities are a part of the whole social movement based on the Ejidal Bank. They are both made possible by the bank and made to take their proper place in the whole through the bank. The second important thing is that the medical facilities are operated democratically, that is, the experts in that line of work are regarded as truly competent in their field but this competence is only one of many tools in building a better life for all.

Education: Lifting by the Bootstraps

Likewise, educational work in the Laguna region is a work in which the people of the whole region may be said to share. This will be apparent if some facts are considered. The Federal Education Department is responsible for the educational and cultural activities in the region. But of the 300 schools in the Laguna, 254 have a school plot each, the proceeds from which are used for the building of open-air theaters, houses for teachers, and annexes. Each plot is of 4 hectares. The produce amounts to 1,500 to 2,000 pesos a year. Since the ejiditarios by this means contribute their own toil to the advancement of their schools, it is clear they have a deep interest in their success. This resembles the work they do in building their medical facilities.

In every community, also, there are educational committees composed of 5 members of the ejido. These committees have built 134 houses for teachers. The committees devote attention to many things. As an example, they are now conducting a campaign to electrify all communities in the region, of which 113 now have electric lighting. They also work with the women's leagues. There are 159 women's leagues that include school improvement among their many activities.

To improve the academic equipment and unify the methods of teachers, the Department of Education has established 34 centers of pedagogical cooperation. In addition, the teachers also were given instruction in physical culture, esthetics, medical research, farm economics, and minor rural industries. As a further means of assuring efficient operation, 10 Federal education inspectors paid 2,223 visits during the year, or an average of 7.4 visits to each school. In these ways, the present educational system aims at fitting the schools to the real needs of the people and taking away from the pupils' minds the fallacies prevailing in the past. The people have shown that they have confidence in their schools and eagerly send their children.

There were 22,601 children registered in 1939 and the average attendance was 15,335. In the night-school courses, the enrollment was 4,865, of whom 2,053 learned to read and write during the year. There were 300 schools with 443 teachers.

The nature of this achievement can be seen at once if it is pointed out that 202 schoolhouses have been built since 1937, and that there were only 288 teachers in the region before the redistribution of the land. By such methods the peasants of Mexico are being made able to lift themselves into a better way of living.

The Agronomist in Mexico

A question often asked by visitors to the Laguna region is, Why are the main financial and organizational departments of the Ejidal Bank in charge of agronomists and engineers? The full answer to that question would take much time, but it needs to be pointed out here that Mexican agronomists have always been among the pioneer thinkers who have believed that land reform was the way to a better Mexico. Their patriotism and their knowledge alike thus qualified them to stand in their present positions.

Even before the revolution of 1910, Mexican agronomists were prominent in writing articles calling for better distribution of the land. In that struggle and later, they suffered much for saying what they felt to be the truth and for working for the peasants' interests. Yet, as a group, they remained steadfast.

So, in 1921, the agronomists of the country held their first great congress in Mexico City and discussed thoroughly the Mexican land problems. This congress developed an educational plan for the agricultural schools of the country and also placed the agronomists in the place of chief guiders of the national farm economic program.

Since then vital as well as technical subjects have been taught in the agricultural schools. These vital subjects are: Farm economics, farm land legislation, farm credit, and sociology. In these courses, the influence of the agronomists as old-time social pioneers has projected itself. It is kept vigorous, also, because after they have lived for long years close to the peasant, sharing his problems, his sorrows, and his pains, the agronomists return to these schools to give a new teaching to the new students.

And when he is not teaching, the agronomist of Mexico is busy putting to work the legislation that, many times, he has helped to draw up. Daily, agronomists are plotting and distributing ejidal tracts, building ejidal schools, instructing ejidos in farming methods, or acting as directors for the financial and technical programs of the farming cooperatives.

But the base upon which all of the activities—technical, cultural, medical, and others—is built in the Laguna region is the Sociedades Colectivas do Creditox, or collective credit societies. These are the groups of farmers, or ejidatarios, who make up the ejido, or community which owns and works the land collectively. They are the groups to which the Ejidal Bank makes its loans, and their collective good faith is the only collateral for these loans. There are 308 sociedades in the Laguna, to which the bank has advanced 30,000,000 pesos. None of this has been lost. To see fully how the Laguna region functions, it will be well to describe how they operate.

In each sociedad there are an administrative commission and a supervisory board. Each consists of six members, with an alternate for each, and with a president and secretary. The administrative commission is the executive body of the sociedad. One of its members is elected delegate member to be in immediate charge of operations. With the president of the commission he signs all legal documents of the sociedad.

The supervisory board is a body of more general nature. It sees that investments of the society are made as directed, that ejidal lands are properly used, and in general that the constitution of the society is followed by the administrative commission.

The practical carrying out of the decisions of the administrative commission in an ejido is in charge of several officials who are elected in general assemblies by the ejidatario members. The most important of these are the work boss, the warehouseman, the mechanic, the corral keeper, and the consumption chief. The work boss is the most important of these; indeed, the others are under his direction.

It is by working directly with the work boss that the Ejidal Bank, through an assistant zone chief, makes close supervisory contact with the work of the ejidos. The Laguna region is divided into zones, with a zone chief and assistant, for this purpose.

Weekly, the work boss and the assistant zone chief, in consultation with the administrative commission, distributes the work of the sociedad members for the following week. Weekly, the boss gives to the assistant zone chief a notebook in which he has listed all of the sums advanced the sociedad by the bank and the work done by each ejidatario.

Each ejidatario carries a work card given him by the work boss. Finally, the work boss and the assistant zone chief work out together the operating plan upon which is based the bank's advances to the sociedad.

Upon the basis of his reports, the assistant zone chief makes out a "weekly report of work and cost of agricultural machinery" and a "weekly report of consumption of fodder and work done by animals." Together with these reports, a promissory note is sent to the bank signed by the delegate member of the administrative commission and the president of the supervisory board, covering the sum due the bank for the week's operations.

The duties of the other officials do not need to be explained here, except to say that the consumption chief is in charge of the cooperative store and that the warehouseman, besides his numerous duties, posts on a bulletin board weekly reports on fuel, lubricants, and fodder used, and the amount of money advanced by the bank for their purchase.

In addition to the activities already mentioned, the bank keeps constant watch over the work by means of employees from the headquarters in Torreon who observe each week the progress being made in each field under cultivation.

It remains to be said that in all operations of the ejido, the farmers and the employees of the bank work side by side and in harmony. While the bank retains the right to disapprove any actions, nevertheless, it must be said that in almost all cases any disagreement has been easily disposed of. In all cases the farmers and the bank make their decisions jointly.

A Little Place
IN THE COUNTRY

By J. C. ELLICKSON. *It is an interesting fact of American life that many work hard so they can leave the farm or small town to seek their fortunes in cities, where they work harder so that they can some day buy a farm. We may be on the threshold of an "agrarian" movement among city dwellers; there are values in that, and difficulties, too.*

THE PURCHASE of farm land by city people, which has been traditionally a speculative venture, is becoming important as an investment to attain security. As a result of the post-war deflation beginning in 1920, individuals and financial institutions acquired title to millions of acres of farm land through foreclosure because the farm operators were no longer able to pay interest and taxes. This "involuntary" acquisition on so large a scale has attracted considerable attention, but the voluntary purchases of farms by people with nonfarm incomes usually have been regarded as exceptional cases without general significance. But in the aggregate they indicate a trend that will be of considerable social significance if continued.

Analysis of census returns from 1880 to 1935 indicates that the proportion of the total value of farm land and buildings owned by the operators has decreased steadily at the rate of 4 percent every 10 years. There are many indications that this trend will continue and may even be accelerated. The most important cause is the present and probably increasing ability of city people to save money as compared with farmers, combined with the increasing attractiveness to city people of farms as an investment. Another important factor is the increasing cost of the machinery and equipment necessary for the efficient operation of a modern farm.

Thousands of farms come on the market each year through the retirement or death of owner-operators who leave no heirs or none able and willing to operate the farm. Unless these farms are purchased by potential operators, the proportion of tenants will continue to increase.

With below-parity farm income, it is difficult for the average tenant to save enough money to make a down payment. Through good fortune, extraordinary efforts, or rigid economies at the expense of living standards, some tenants still manage to move up the agricultural ladder to ownership, but they are becoming the exception, not the rule.

The pressure of population on land in some areas, and the desire for additional land fully to utilize power equipment, provide an opportunity to increase rents, thus making it even more difficult for tenants to save. The purchase of additional land by those already owning is easier but no solution of the problem of the landless farmer.

The ambitious young farmer, starting out for himself with limited capital, is faced with the choice of renting land and buying the most efficient equipment within his means, or of using part of his capital as a down payment on a smaller or less productive farm. If his capital increases, he can buy more stock and better equipment and rent a larger or better farm, or alternatively use part of his money as a down payment. Many farm-management studies have shown a greater return on investment in stock, equipment, and operating reserves than in land. Furthermore, bitter experience has demonstrated how quickly the equity in a farm may be wiped out. For these and other reasons, even tenants who are able to buy may prefer to continue renting. Most tenants have no choice.

Even during periods of agricultural prosperity, with expanding markets and rising land values, farmers were not able to retain their proportionate equity in the land. For a long time, these rising land values obscured the fact that farmers, as a group, were not receiving enough income from their farm operations to save money.

Why City Dwellers Buy Farms

And of those who did accumulate wealth, many retired or moved from the farm, thereby transferring capital and title to land from the country to the city.

At the same time that farmers find land purchase difficult or inadvisable, to many city people the idea of owning a farm is attractive and land appears to be a sound investment. Urban residents, as a group, have accumulated savings for which there are limited opportunities for investment, as indicated by record bank deposits and low interest rates. With memories of stock market crashes and failing banks, many believe their future will be more secure if they own something tangible, like land and buildings. They may buy a farm, partly as a haven in times of social stress, as a place on which to retire in old age, as a hedge on inflation, or for many other reasons. They buy as an investment, primarily in the hope of safeguarding their capital, rather than taking a risk for a speculative profit or a high interest rate.

Many farms near large cities are bought primarily for homes. The suburbs continue to expand into the country as automobiles and improved roads open up wider areas, inaccessible by railroads or trolley lines. Commuters from New York City, for instance, ride longer and longer distances into Connecticut. Artists, writers, and others who are able to work at home, may live beyond the limits for full-time commuting.

Gentlemen Farmers As Landlords and Competitors

Farther out, farms are purchased for week-end or vacation visits or as summer homes. Many New Yorkers own a Vermont farm for the latter purpose. Some farming may be carried on with hired labor, the fields may be rented out, or let go back to brush. But even when the farm is neglected, the buildings are usually well maintained. Such purchases are made not only by the well to do, but also by families with relatively low incomes who wish to escape high rents and supplement their earnings with part-time farming.

When farms are purchased by city people solely as an investment, productivity and the probable rent return are more important than location. But the investor usually likes to visit his farm occasionally and prefers property within easy driving distance. Contrary to the practice of many involuntary owners, the new proprietor may be willing to spend considerable money on paint, repairs, new buildings, and soil conservation practices in order to protect the initial investment. Such expenditures may be charged to operating expenses and deducted on income taxes. These investors may be better landlords, from the viewpoint of the tenant, than a retired farmer or widow who needs all of the rent for living expenses, or an unwilling owner who has acquired the farm through foreclosure and has no interest in it other than a hope that he can get his money out of it.

In recent years some city people have attempted actual farming operations on a large scale. With plenty of capital, deflated land costs, new equipment, modern methods, good management, and the efficiencies of large-scale operations, some have made money. Others have discovered that the application of "good business methods" to farming was not so easy as they had supposed. In either case they are strong competition for farmers who have no other sources of income to draw upon.

Growing Difficulty in Bidding for Land

No statistical studies have been published on the sources of capital invested in farms. A thorough analysis of the 1940 census may indicate some of the changes that have taken place. Almost any person familiar with agriculture can think of one or more farms bought within the past 10 years by persons not dependent on farming for a living, but these are usually thought of as exceptional cases. The total number is undoubtedly larger than generally realized and is significant in the regions most affected if not nationally. Purchases for residential purposes are particularly numerous in the Northeast and along the populous Atlantic Seaboard and investment buying is frequent in the Eastern Corn Belt.

To the extent that the international situation and defense program may depress agriculture and stimulate urban activity, farmers will find it increasingly difficult to bid against city people for land. As more owners become tenants or wage hands, the premises on which agricultural policy has been based are challenged, for it has usually been assumed that the typical American farmer was an owner or had good prospects of becoming one.

The Plantation South

TRIES A NEW WAY

By R. W. HUDGENS. *In this day of troubles, we are especially interested in Democracy and democratic ways—in working together, unity, cooperation, improvement of homes and health and security. These are matters discussed here by the Assistant Administrator of the Farm Security Administration.*

THROUGH ALL these years, the plantation system, that mainstay of southern agricultural economy, has been praised on one hand and condemned on the other. And logically enough. At its best, the plantation offers a large degree of security to families who work in the fields, and makes efficient use of their labor; at its worst, it deprives these families of a part of the profits they have earned.

Today in the Midsouth approximately 1,700 former tenant families are looking on the plantation way of farming with a high degree of favor. On 31 southern plantations these families are working both as plantation operators and plantation tenants, and taking full advantage of all the good that the plantation economy has to offer.

These operator-tenants carry out their dual role in a simple way. First, as operators, they form cooperative associations and lease the plantations from their owners. Then, as tenants, they sublease individual tracts from the cooperative.

The first of the land rental cooperative associations began operations in the spring of 1939. At that time 827 tenant families went together to lease 17 typical cotton plantations in Arkansas, Mississippi, and Louisiana. Last spring the number of associations jumped to 31, with a membership of 1,699 families, of whom 949 are Negro and 750 white.

Plantations now under lease include 13 in Arkansas, 10 in Louisiana, 4 in Mississippi, 2 in Missouri, and 2 in Alabama. These 31 plantations contain 94,600 acres, of which 62,800 acres are in cultivation. Additional land rental cooperatives, scheduled to begin operations next spring, are being organized.

To form a land-rental cooperative the tenant farmers, with the aid of the Farm Security Administration, draw up a charter and bylaws, subscribe $1 each for a share of stock, elect a board of directors, and organize under the laws of the State. Then, in the name of the association, they lease a plantation from its owner for a period of usually 5 to 10 years, and agree to pay a yearly cash rental for the land and buildings.

Often the arrangement includes an option for eventual purchase. In the lease either the owner or the association agrees to place the existing buildings in adequate repair, and the cash rent is adjusted to credit whichever one does this work. The association also agrees to operate the farm under sound soil-conserving practices. Total cash rentals paid by the 31 associations during the current year amount to more than $389,000; the additional rentals paid in the form of building repairs and land improvement are not easily computed, because a great deal of the labor is done by the farmers themselves.

In operation, the cooperative fills the position usually held by the plantation owner. It subleases individual tracts to each one of its members on a rental basis, and operates all of the usual plantation enterprises such as grist mills, commissaries, gins, tractors, and other large-scale machinery. In some cases, where the association members lack the skill needed to operate their individual tracts on a rental basis, the association sets them up as sharecroppers.

The Appointment and Work of Farm Managers

The association may also operate the large pasture and feed-crop tracts. Of the 1,699 farmers in the associations, 1,328 work their individual tracts as tenants on the normal rental basis—usually a third of the cotton and a fourth of the corn crops, with cash rent for the feed, garden, and truck crop areas. The remaining 371 farmer-members work as sharecroppers, keeping half of all crops for their year's labor.

The management of the enterprises of the cooperative is in the hands of a trained farm manager appointed by the board of directors. The manager is responsible for such enterprises as the commissary and gin, and supervises generally the farming operations on the individual tracts.

He can be compared to the average plantation manager—with the important distinction that the farming program this manager is directing emphasizes the welfare of the tenants.

Few regular plantation managers spend as much time in helping the tenants plan their work, or in encouraging them to place home production of their personal needs above all other goals. On the larger plantations the manager has an assistant and a bookkeeper; and in nearly every instance a home supervisor spends her full time with the farm wives, helping them can their surplus garden products, make their own clothes, plan balanced diets for their families, and budget their incomes.

Most of these families have worked as sharecroppers all their lives, and without the help of the supervisors they would have little chance to learn modern farm-management practices. Moreover, if the progress made by the plantation families matches the progress made by standard rehabilitation borrowers, their increase in net worth will more than balance the cost of supervision.

Operating capital needed by a land-rental cooperative is obtained through FSA loans. The plantation rental is the principal item of expense. Funds for the operation of the cooperative enterprises, and the cost of "furnishing" the families working their tracts on a sharecropper basis make up the remainder. As of August 31, 1940, loans to the land rental cooperatives totaled $885,916.

$600 FSA Loans for Animals, Seed, Equipment

In addition, each tenant family on the plantation gets a standard rehabilitation loan. Since most of the families came to the plantations with little or nothing in the way of possessions, these loans average about $600, and are used to buy work stock, milk cows, brood sows, fertilizer, seed, and equipment. Each family receiving a loan makes a farm and home plan that emphasizes the home production of the family's food supply and the development of two or more cash crops for market. The cotton acreage allotment for the plantation is divided among the families on the basis of their size, and each family receives its share of the AAA payments.

Besides the income derived from his own tract, each farmer shares in the profits of the cooperative association. The basic purpose of the association, however, is not so much to make a profit as to provide services to its members at a minimum cost.

For instance, on most of the leased plantations the cooperative carries on an equipment rental enterprise, through which the farmers obtain the use of heavy farm machinery they could not otherwise afford.

During their first year of operation, 10 of the 17 associations then in existence ended the season with an average profit of $3,000 each. The other 7, largely because of adverse crop conditions, ran up an average deficit of a little more than $5,000 each. Of the 10 cooperatives making a profit, 3 declared dividends totaling $978. The remainder set their total profit aside as reserve. A report made on December 31, 1939, showed these 17 associations to have assets of $496,674. The loans they had received totaled $425,053. A similar report on the progress of the associations operating this year will be available at the end of the crop season.

The various enterprises operated by the 17 cooperatives during 1939 were as follows: 17 leasing enterprises, 14 equipment rental enterprises, 11 purchasing and marketing enterprises, 9 crop farm enterprises, 6 livestock rental and sire service enterprises, 4 machinery and equipment repair shop enterprises, 2 cotton gin enterprises. Of all these, the leasing, the purchasing and marketing, and the cotton-gin enterprises were the most successful financially.

Advantages: Better Practices, Health, Homes

The chief advantage which the leasing associations give to the tenant is access to the land. Farm owners are finding that they can get along with fewer tenants, and each spring many of the less capable sharecropper families find it impossible to get a place to farm. The leasing cooperatives help to cushion the shock of this displacement.

Education in sound farming practices is the second advantage of leasing cooperatives to the tenant family. Untrained in modern ways of farming, many sharecroppers, even if given the opportunity, would have little hope of making an adequate living. Grouped together on a plantation where trained FSA farm-management and home-management supervisors can work with them every day of the year, their prospects of getting ahead increase a hundredfold. Here they can get help in planning their work and keeping records of their income and expenses. They can learn to raise most of their own food supply, diversify and rotate their crops, care for their livestock, and otherwise run their farm in a practical, economical way.

Better health is a further benefit received by the tenant families. Not only does the home-produced food supply give them a balanced diet, but, on most of the plantations, adequate medical care is available at a cost within the families' ability to pay.

A fourth advantage to the operator-tenant is the number of cooperative activities available on the plantation. The chance to share the use of large-scale farming equipment, take part in group purchases of basic farming supplies, and similar enterprises all help the farmer cut expenses and do a better job of farming. Still another aid to the leasing cooperative member is the assurance of at least a minimum standard of housing. In a section where most farm houses protect their occupants from neither the weather nor the flies, the tight roofs and screened windows of the leased plantation houses represent a long step forward.

The owner of the plantation, for his part, is assured of an income that will enable him to meet his fixed charges and give him a good return on his investment. He also has the satisfaction of knowing that his land is being worked under sound soil-conserving farm practices and that his buildings are being maintained in good repair. Also, this is a way to help low-income farmers to help themselves. Too often it has been impossible to help those at the very bottom of the economic scale, because the starting point for their rehabilitation—a tract of farm land—was unobtainable. This difficulty the leased plantations are helping to solve.

The coordination of agriculture and machine industry in the interests of a balanced economy, related to the task of maintaining the essential economic independence of America, is the supreme task of the contemporary statesman . . . we need to develop a new science which, for want of a better name, we may call nation-planning, supplementing the budding science of city and regional planning, inviting all classes and interests to put away self-deception as far as it is humanly possible, and devote their imagination and executive powers to organizing and maintaining a fairly balanced system of national economy.

—CHARLES A. BEARD

Land Ownership and The NATION'S LIFE

By WILHELM ANDERSON. *We have no more important problem than the one treated here: Who should own our land, and how should it be used for the greatest good? Many will disagree with Dr. Anderson's conclusions and recommendations, but no agricultural worker will gainsay the validity of the problem or the need for considering it carefully.*

IT HAS BECOME commonplace in discussions of cooperative land-use plans to speak of the "philosophy of the program" as something distinct from its technique and fact.

This philosophy is said to relate to certain accepted national objectives, including the conservation of land and human resources, a more stable and balanced agriculture, and the more abundant life for all farm people.

But even more fundamental is that there shall arise in the planning process an understanding of the social function of land in the life of this Nation that will make possible the achievement of the objectives.

It is not probable that many will disagree openly with the social desirability of trying to reach these humane and democratic objectives. Disagreements and differences, if any, are more likely to arise concerning appropriate methods of achieving them. Many who are trying sympathetically to advance the aims may not realize, furthermore, that they cannot be fulfilled in any significant and equitable sense without legislative restrictions on conditions of holding land in private ownership.

This contention derives from the fact that our tillable land is limited to something less than 500,000,000 acres, after account has been taken of plowable pastures and lands subject to reclamation at socially desirable costs.

The 1930 census disclosed that 59.6 percent of American farms were under 100 acres in size; yet these farms included only 15.7 percent of the farm land, only 22.7 percent of the harvested cropland, and less than 29 percent of the value of land and buildings.

On the other hand, although all farms exceeding 174 acres included only 19.4 percent of all farms, yet these same farms comprised 66.1 percent of all land in farms, 53.5 percent of harvested cropland, and more than 47 percent of the value of land and buildings. Can we plan meaningfully for a balanced, stable, and abundant agriculture while this distribution prevails?

Our primary farm management

problem is not to increase individual farm productive efficiency but rather to create a social technology so that the farm population can be adjusted to available soil resources on a more equitable and socially efficient basis, without which there can be no really effective farm management practice on a national scale.

Adjustment of Farm People to Soil Resources

In the Southeastern States, where the maladjustment of the population to the land is most acute, operating units average only 71 acres, and nearly one-fourth of them average less than 20 acres. Throughout the Nation probably one-third or more of all farms are so inefficiently organized as to availability of needed soil resources that they cannot sustain the operating families on any acceptable level of living.

This condition should evidence a crying need for altering the traditional concept of land as a fixed commodity to be held for speculation, to be exploited, subdivided, composed, let, assigned, mortgaged, sold, bartered, bequeathed, and otherwise alienated at the will of the legal holder without restriction. These unrestricted conditions of holding land in private ownership permit the landlord to shift most of the cost of maintaining the public services that support the use values of his land onto the shoulders of nonlandowners, thereby enabling him to capitalize increments in land value and to exact an interest return thereon.

Land Is Not a Commodity

Land is not a commodity. Land is not the product of man, nor with all the ingenuity of classical economists can he ever mix his labor with anything that is not land and thereby fashion land. Land is the gift of Nature entrusted to man's keeping upon which he may project his energies of mind and muscle and thereby support life and fashion a civilization.

The citizens of the United States—all of them, rich and poor alike—are the ultimate and absolute owners, as participants in national sovereignty, of all the natural resources of the Nation, and on their behalf the Federal Government acts as the ultimate custodian of these resources.

There is need today for an alteration in our traditional concept of land from that of a fixed commodity to that of a sacred trust to be administered in the interest of all the people who are directly and indirectly dependent upon it for their well-being and livelihood.

Tragedies of Soil; Tragedies of Peoples

The moving picture of the ages has been but an unending succession of the rise, domination, decadence, disintegration, and final disappearance of one people after another, and the records of these tragedies are writ large in the wasted soil resources of these vanquished peoples.

The strength, general well-being and national integrity of a nation are similar to those of a farm family.

When the soil resources of the nation and of the family are gone, decadence sets in, followed by the disintegration of the cultural additions to the land, and finally the integrity of the family as a component of the community disappears.

The Government, the Custodian of a Heritage

All privately owned land within the United States, and all land owned by State and local governments, is held from and under the Federal Government which has rights upon and obligations to it which have not passed to any private or public owner through recognition or transference of title in fee simple absolute.

These rights are the rights of sovereignty, the rights of the people. They are inalienable and they arise from the custodial obligations of the Federal Government to the people to conserve their common heritage and birthright for their present and future use and well-being.

The liquidation by the Federal Government of its obligations and the exercise of its rights have not been so uniformly attended with favorable results as might well have been expected.

The Havoc That Man Has Wrought

This wastage is evident on every hand. We are just now coming to recognize its meaning and consequence.

In order to develop the Nation's natural resources, populate expanding frontiers, provide a tax base for local governments, foster private enterprise, promote industry and thrift, and preserve ownership in land to those who till it, our founding fathers deemed it expedient to vest title to land in private owners in fee simple absolute. During the nineteenth century and the first quarter of this century, a period of rapid agricultural and industrial expansion, our natural resources seemed inexhaustible.

The situation is different today. The land has now been developed and, in large measure, wasted and ruined through reckless exploitation. The purpose of development, if not of exploitation, has been achieved with respect to our agricultural land, and to this extent the vesting of title to land in private owners may seem to have been justified, although the conditions of title to agricultural land as vested in private owners have fallen far short of promoting the general welfare in at least three significant particulars: In conserving the soil resources of the Nation, in controlling the distribution of the available soil resources equitably among the farm population, and in preserving ownership to those who till the soil.

Frontiers Go; Waste and Ruin Come

The agricultural land of the Nation has now been developed, the frontiers have been taken, and in the march of our agricultural and industrial occupation waste and ruin of our basic natural resources have been strewn on every hand.

The aftermath of this occupation is now upon us: Industry approaching maturity; the population approaching stability; heavy credit balances with foreign nations; declining exports; unemployment; meager opportunities for youth; larger and larger accumulations of capital in fewer and fewer hands; gutted and closed mines; abandoned oil fields; wasted fuel resources; stripped and denuded forest lands; ghost towns; stranded populations; heavy subsidies to agriculture; gullied and skinned and badly eroded soils; 500,000 farms ruined for farming purposes throug accelerated soil erosion; another 500,000 farm families on farms so small that the soil resource will not sustain them on any acceptable levels of living; 42 percent of all farm operators tenants; 40,000 new tenants added each year; 1,000,000 tenants moving each year in attempts to better their condition, and another 1,000,000 tenants equally insecure in their tenure; 3,500,000 rural families receiving public assistance during the past decade; 58 percent of the equity of farm real estate in the hands of nonfarm operators; dilapidated buildings, unsightly premises, homeless migrants, hopeless mothers, undernourished children, diseased bodies, vacant hopes, misery and want, unrest and despair.

This is the national picture in its darker aspects—indeed stark and foreboding in a land blessed with great natural resources. Cooperative land use planning as a national undertaking is committed to the working out of ways to alleviate those evils, as they affect agriculture. It is indeed timely that we take stock not only of our remaining natural resources but also of deficiencies in our past stewardship of these resources.

Individual Greed Outstrips National Prudence

We have long rejoiced in our untrammeled individualism, in our unhampered freedom to exploit our substance, in our rights to exercise our ingenuity and genius through private enterprise, uncontrolled by concerns for the general welfare, but in all this rejoicing our prudence as a Nation has not kept pace with our greed as individuals.

It has been conservatively estimated that the conditions of holding land in this country are such that one-third of all farm families of the Nation are now living under such disadvantaging conditions of land occupancy as to reduce their level of living below any acceptable standards of decency.

What will be the aspects of the picture 50 years hence if appropriate remedial measures are not soon instituted?

It often is asserted that unfavorable prices, poor land, climatic catastrophes, high interest rates, burdensome taxes, overcapitalization of land value, unfavorable lease arrangements, uninformed farming practices, and low managerial abilities are the major causes of insecurity of farm tenure and the consequent rural poverty, dependency and destitution that follow in its wake.

No doubt these conditions contribute to insecurity of farm tenure and operate to reduce many owners to tenants, tenants to croppers, and croppers to farm laborers, and operate conversely to retard ascent up the agricultural ladder.

For many years, if not decades, the steady increase in farm tenancy and the steady decrease in the equity of farm operators in the land they till have been evident.

The Chronic Disorder Remains

For a number of years agricultural reforms of various sorts have been designed to modify or remove the causes of insecurity of farm tenure.

We are trying parity in prices, improved soil and forest conservation practices, benefit payments, lower interest rates, longer amortization schedules, equalization of taxes, revaluations of land, improved lease forms, adjustment of excessive debts, improved farm-management practices, and improved school facilities, and although these remedial measures have substantially assisted in alleviating surface ills, yet the chronic disorder within the system is still present with us, and we continue to have more than 2,000,000 disadvantaged farm families.

Have the diagnoses been inaccurate? Or have the remedies prescribed not been applied consistently or over an insufficient period? Or may it be that an accurate diagnosis is impossible until we as a people have arrived at a common understanding concerning the social function of land in the life of this Nation?

The very structure and operation of nature, human history, common sense, and logic, all conduce to substantiate that the social function of land in all its uses in any Nation is to sustain and support all its citizens in all their material wants.

Throughout the civilized world there is a general recognition of this function of land; witness the land reforms instituted in various countries to effectuate a more equitable and socially efficient adjustment of population to the land, especially where the feudal system had operated to concentrate land in large estates.

Legislative Restrictions on Holding Land

The adjustment of farm population to available soil resources is a national problem of the first magnitude; it is not likely to be solved successfully without drastic legislative restrictions on present conditions of holding land.

These restrictions should probably relate to size of holding, subdivision, use, consolidation with another holding, occupation and residence of holder, assignment, letting, taxation, security for debts, alienation, and inheritance. It should soon be possible, on the basis of appropriate State and Federal legislation and carefully delineated local land use areas which are reasonably homogeneous as to physical features, to administer such restrictions through State and county boards of agricultural holdings, established under State law and empowered to determine family-size farms for each local land use area.

County land-use planning could be of substantial assistance in such an undertaking.

Many nations have had to contend with the problem of land tenure and have modified their systems of land tenure so as to provide reasonable security of tenure and security to farmers in accordance with their standards of living.

Foreign enactments and reforms have been directed along two lines: First, to effect changes in titles to provide ownership to those who till the soil and to provide exclusive use of farm land to the tillers of the soil under State ownership and State tenancy (the exclusive aim in Russia, and a lesser aim in Denmark, Mexico, England, Wales, and Scotland); and, second, to improve the status of tenancy without changing existing titles through revision of leasing arrangements.

The land tenure difficulties of this country lie primarily in our utter lack of any legislatively defined National and State policies specifically designed to promote the more equitable and socially efficient adjustment of farm population to available soil resources. This is a problem that every country has had to face after its land had all been taken up and its frontiers closed. To approach the question intelligently, we must clarify our thinking concerning the social function of land in national life, and analyze carefully the elements of private property in land as presently legalized with a view to eliminating elements that obstruct that function.

In land-use planning it is necessary to keep constantly in mind two types of productive efficiency: one individual, the other social.

The first concerns improvements in individual farm productive efficiency, which, when not modified by the social, often brings suffering and misery to those who are dispossessed and disinherited by technological processes. One operator, by appropriating the land resources of three of his neighbors, may enhance his own productive efficiency twofold, but in so doing may create the social inefficiency of three landless farm families.

Shall land be regarded as a resource upon which to exalt individual farm productive efficiency and highly commercialized agriculture, and shall it thereby serve to force out of agriculture all who are dispossessed and disinherited in the process? If county land-use planning is concerned with all the tillers of the soil who by experience and training have a just claim upon agriculture for a living, should it not direct its attention to exploring what may be achieved in enhanced standards of living on, say, 50 acres of cropland and 50 additional acres of woodland for a farm family whose aspirations are rooted in the soil?

A farm family's assurance of freedom and security and a decent living are all deeply rooted in the continuous possession of such a piece of farm land as will serve to sustain it over the years under careful management. This function of sustaining the operating family appears to be the proper and only socially justifiable function of agricultural land.

If we should see fit to bend our genius to exploring how many farm families the soil resource of the Nation could be made to support, we might find that not only could it be made to sustain the present 7,000,000 operators, but a land base might also be provided for the some 4,000,000 paid and unpaid farm laborers of the Nation.

If farm people should lose patience with the family size farm, who is there to say what standards of living might be achieved on a unit of 20,000 acres, half in cropland, organized as a cooperative nonprofit corporate holding, with competent management, supporting, say, 200 families, designed as a community enterprise under private landholding auspices? Who is there to say that such a farm organization could not incorporate industrial elements which would keep all the families occupied throughout the year?

One thing seems clear: Our agricultural land resources, if equitably distributed and carefully managed, appear ample upon which to rear a rural civilization the like of which this world has never seen in enhanced standards of living. But is such a civilization likely to be reared by those who see in agricultural science only the servant of a highly commercialized agriculture?

PLANNING BY THE FOUNDING FATHERS

By HELEN W. JOHNSON

THE COUNTY LAND USE planning program has revived considerable interest in its progenitor, the New England town meeting, which still survives in many parts of that region much as it was in the days of the founding fathers.

The town meeting represents the persistence of the truly democratic ideals in American life. It is a living, functioning, democratic form of local government, in which all citizens take active part. Issues of local interest and concern are submitted to vote, and disposed of, and there is always wide participation and animated discussion of the vital affairs of the town. The town hall, or meeting place, is an important center in many New England towns.

John Gould's recent book, *New England Town Meeting: Safeguard of Democracy,* describes it as a legislative body of importance, not a mere forum for discussion. It is second only to the State, "and even State legislatures have been set back on their heels occasionally by independent-minded town meetings." They are still "alive and able and in the hands of a tight-fisted people who keep their heritage well."

THE TOWN MEETING votes for "Town clerk, selectmen, assessors and overseers of the poor, road commissioner, treasurer, members of the school board and all other necessary town officers." It prepares the budget for the year, passing on school funds, highway money, fire protection, street lights, clam license fees, tax assessments, and other matters of finance and administration. In a word, it plans the affairs of the town and executes those plans through suitable action programs.

In the county land-use planning program, in similar vein, discussion revolves about soil erosion, types of farming, population composition and movements, community life, taxation, school consolidation, rural zoning, and many other subjects of vital concern to farm people. And the voice of all of the people is heard in the open community-wide meetings where everyone has his chance to speak. More important still is the fact that these farmers can translate their opinions and desires into policies and programs of action sponsored by the Department of Agriculture. They not only help to solve the problems of their local areas, but contribute to the framing of nationwide policy for the Federal agencies designed to help them.

In this respect the land-use planning program, which must consider community and county problems in relation to the whole agricultural economy of the State, region, or Nation, exceeds in scope and significance the almost invariably local activities of the town meeting.

THE ROOTS of the county planning program undoubtedly lie back in the soil of New England which gave birth to the town meeting, an institution and an ideal. County planning procedures, in which farm men and women wrestle with their own agricultural problems, are strikingly similar to those of the town meetings.

The general objectives are much the same; the subjects discussed, as numerous as the interests and problems of the participants. There's something rather soul-satisfying to an individual in giving expression to ideas of deep interest, and there's a great deal to be gained by a free and whole-hearted exchange of ideas in a group.

Out of the give and take of open discussion comes usually a crystallization of thought and concerted action. There is much of value to the local, State, and Federal Governments in hearing the farmer's voice, knowing what his problems look like to him, getting his knowledge of the area in which he lives, and winning his assistance in carrying out plans which he has helped to formulate to secure a better agriculture and a better rural life.

With its generations of experience and tradition in solving local problems democratically, New England has adopted with easy grace the land-use planning program.

There are many lively discussions—arguments and comments on the family-sized farm, for and against outside labor, on how many acres were necessary, how many cows, how many chickens, and how many different kinds of crops.

The nature of the stimulus to open discussion, whether it be the town meeting or a county or community land-use planning meeting, is not so important as the mere fact that people still do get together in local groups, talk about their problems, present their viewpoints, and have a hand in working out their solutions.

With thousands of groups of this kind operating throughout the Nation, we can be sure that the principle of democratic planning is being perpetuated.

Books

Conservation and Citizenship. *George T. Renner and William H. Hartley.* D. C. Heath and Co., Boston. 350 pages.

By JOHN DREIER

SEVERAL BOOKS have appeared during the past 2 or 3 years in answer to the demand from schools for adequate and authoritative material on the subject of land use and conservation. Nowhere has the increased interest in land problems been more evident than among educational institutions; yet the problem of putting satisfactory teaching material into the teacher's hand has been difficult.

For one thing, the teaching of conservation in the schools has not been thoroughly clarified. On the one hand, instructors in the land-use professions have naturally emphasized discussion of the practical aspects of such subjects as forestry, wildlife management, or soil conservation.

On the other hand, teachers of the regular grades and classes in schools and colleges have recognized that this subject of conservation contained some important knowledge that their students should acquire if, as future citizens, they were to understand the basic problems facing the community. This group of teachers poses a double question: What are the facts about conservation, and how do we get started in teaching it?

Conservation and Citizenship is one answer to this twofold inquiry. The authors have approached the problem from the viewpoint of the social studies, organizing the material in relation to economic and social affairs. The authors are well equipped to handle the task they have set themselves. Dr. Renner, now with Teachers College, Columbia University, is a geographer of note, has worked with the National Resources Planning Board, and has written brilliantly on the subject of American resources. Dr. Hartley is a teacher of social studies at the New Jersey State Teachers College at Paterson.

THE TERM *conservation* has been variously interpreted. To some groups, it connotes primarily the protection of trees, animals, birds, and wildflowers; to others, primarily conservation of the soil. Messrs. Renner and Hartley regard the subject in its broadest terms, including not only the natural resources of forests, soils, water, minerals, and wildlife, but human resources as well. To each major subdivision in the field of conservation the authors have given a separate chapter. Yet it is to their credit that they have made a genuine effort to tie the problems together in a comprehensive whole.

This has been partly achieved by starting the text with an historical background, explaining the attitudes that were created among pioneer Americans, and then tracing the development of the conservation movement in this country. This opening chapter is followed by an over-all view of American resources and their importance to the economic well-being of the United States. Throughout the text the authors have pointed out relationships between various parts of the conservation program, such as the contribution of soil and forest conservation work to flood control.

AN INTERESTING feature of the book is the chapter entitled "Our Human Resources." It may be argued that a discussion of human resources is in itself so large a subject, and introduces so many varied topics in the fields of economic and social organization, that it leads the reader or student far afield from the original starting point of man's relationship to his natural environment. The treatment of human resources by Messrs. Renner and Hartley does not entirely avoid that difficulty. They have, however, used the subject skillfully to point out the fact that conservation is after all important only because of its effect upon human life.

In this respect there is a close link between such programs as forest or mineral conservation and those of housing, public health, and improved governmental systems. Discussion of these social problems enables the authors to lead directly into an excellent last chapter called "America Discovers Planning" in which they point out the importance of planning in the creation of a productive, secure, and beautiful environment for American life.

It is regrettable in this discussion of the conservation movement from the viewpoint of citizenship that greater attention was not given to the new methods of organization that are being developed among citizens for carrying out conservation programs. One of the problems that the authors of the present volume recognize is that of getting the citizens to realize their part in the campaign to preserve our resources—to understand that the job cannot be done by the Government alone. Citation of the progress that has been made in county planning and in soil-conservation districts, for example, would have offered a tangible example of just how the citizens and the Government can work hand in hand and what the role of each group can be.

On the whole *Conservation and Citizenship* is an authoritative and complete presentation. Scientists in each special field may find small flaws or omissions in the material presented. It would be desirable, for example, for the authors to point out more clearly than they have done the distinction between topsoil and subsoil; the fact that erosion can accomplish its major destruction by removing a few inches of topsoil is a matter of great consequence. This fact is not brought out clearly.

YET ANY CRITICISM of the book at hand in terms of its scientific information will merely serve to indicate how broadly the subject of conservation must be approached in the educational program as a whole. Professors Renner and Hartley have presented excellently the material for the social science teacher.

There is, however, a somewhat different story to be told by the teacher of the natural sciences. For the constructive aspects of conservation must be explained in biological, as well as economic, terms.

The science of ecology is charting the foundations of a new concept of man's relationship to his environment. As Copernicus suggested 400 years ago—to the dismay of prideful humanity—that the earth was merely one unit in a great solar system, and not actually the center of a universe bounded by heaven and hell, so are ecologists today discovering that man is but one integral part of the organic entity that we call our environment, and by no means its master. Forces over which man can exercise no control have the power of life and death over individual members of the earth's biological community, and according to those forces and principles man's actions must be guided. A knowledge of the scientific understandings that lead to this concept must be a part of the basic information of educated men and women in the future. Those understandings are the ultimate imperatives of conservation.

Population, A Problem for Democracy. *Gunnar Myrdal.* Harvard University Press, Cambridge, Mass. 237 pages.

By HOMER L. HITT

FOR MANY YEARS the trend of fertility in the industrialized nations of the Western World has been continuously downward. In some of the northern and western European countries, already failing to reproduce themselves, an actual population decrease in the near future appears inevitable. The problem of a declining population is less acute in America because of a higher, though decreasing, fertility rate. However, Dr. Myrdal views this higher fertility as a temporary phenomenon. As for northern and western Europe, he foresees for America the prospect of a declining population. It was with the hope that America may profit somewhat from the population experience of the Old World and particularly Sweden that Myrdal selected for the subject of a series of lectures at Harvard University under the Godkin Foundation the general topic: The Population Problem and Social Policy. These lectures, slightly rearranged, comprise this volume.

The author briefly traces "the history of population theory in its relation to political thinking." For the past few centuries the political "meaning" of the population problem has shifted with the changing rate of human reproduction. Only recently the problem was the humane limitation of the population through birth control. Now the chief worry is that birth control will be "carried too far." Consequently today the problem is "how to get a people to abstain from not reproducing itself."

MYRDAL STATES that, prior to the formulation of population policy actually designed to cope effectively with the situation, an ideological crisis of tremendous proportions will occur in western society. This crisis in population attitudes will be unleashed by the continued decline in fertility. Present-day thought and action concerning population will appear trivial.

After this resurgence, which will be enduring, social policy in its entirety will be dominated by the population question.

Almost one-fourth of this volume is devoted to the economic justification of population policy to bolster the falling birth rate. Briefly, the argument hinges on the idea that investment risks will be increased and the demand for new investment will be diminished by a declining population. Then the Government will be forced to intercede, regulating individual enterprise and making up for the deficiency in investment opportunities. However, Myrdal admits that these economic conclusions should be further tested by more thorough research.

ASSUMING 100 PERCENT net reproductivity, i. e., a stationary population, to be the goal, Myrdal proceeds to sketch the primary considerations for a positive population policy in a democratic country. Fundamental are the two closely associated principles that "undesirable births shall be prevented" and "the birth rate shall not be maintained by the undesired births." Equally stressed is the fact that no appeals shall be made to an individual's sense of national duty to rear children. Consequently the task confronting democracy "is so to alter the basis of the institution of the family in our society that the ordinary citizen, educated to high standards of culture and hygiene and well informed in the technique of birth control, voluntarily chooses to aim at a family with four children." Birth control is held to be basically, but not exclusively, motivated by economic interests. In view of this, the method of population policy amounts to the transference of income from families without children to those with children. In practice this transference will resolve itself into an expansion of the phases of social policy bearing upon the family and children.

In this thought-provoking volume, Myrdal frankly discusses the political element in the population problem. Not all experts would be as one with him to the last detail. In the main, however, his thesis is founded on fact. A population decline does appear in the offing for the western world. That this prospect is welcome in neither the "democracies" nor the "dictatorships" is indicated by the positive population policies conceived and instituted in the recent past by the Governments of Sweden, France, Belgium, Italy, and Germany. Some years will elapse before America is brought face to face with the birth shortage already perplexing Europe. When she is, this work of Myrdal's will help her solve the problem in a democratic way.

THE LAW OF PUBLIC HOUSING. *William Ebenstein*. University of Wisconsin Press. Madison. 150 pages.

By MONROE OPPENHEIMER

THIS IS A STUDY of the legal bases for the public housing programs of the Federal Government and the States, as initiated by the Public Works Administration and continued by the United States Housing Authority and the local housing authorities which the latter agency finances. The study is adapted primarily for the lay reader, although lawyers will find it useful as an introductory survey.

Slum clearance and public housing, seriously questioned no more than a decade ago, have by now been explicitly accepted by the courts of highest resort of 25 jurisdictions as constitutional functions of the States, and implicitly recognized by the United States Supreme Court as a constitutional function of the Federal Government. The outstanding decisions of these courts are discussed at considerable length. There are also a brief chapter on foreign experiences, and appendices consisting of reprints of the United States Housing Act and the opinions in two leading cases on the constitutionality of State housing programs.

The author, quite understandably, limits his discussion to urban housing projects and to the present provisions of the United States Housing

Act, which was designed primarily to cope with the urban housing problem.

EVEN UNDER THE present law, however, public housing projects for farm families have recently been initiated by several local housing authorities financed by the United States Housing Authority. In addition, amendments to the present law have been proposed, which would explicitly provide for a large-scale rural public housing program. Because of these developments, this book has interest for those concerned with the housing of low-income families in rural areas as well as for those more directly concerned with urban problems. But the book does not consider, except in passing, the programs of the Federal Housing Administration or the Federal Home Loan Bank Board in urban areas, or the programs of the Farm Credit Administration and the Farm Security Administration in rural areas. Hence, useful as it is for its discussion of the United States Housing Act, it gives only a partial picture of the extent of governmental activities in the housing field.

THE PULSE OF DEMOCRACY. *George Gallup and Saul F. Rae.* Simon and Schuster, New York.

By BELA GOLD

PUBLIC-OPINION POLLS are important and prominent, yet rather mysterious. They have stirred excited comment from partisans in the issues that have been studied. Their methods and their accuracy have been discussed and questioned again and again, both by laymen and by professional social scientists. In short, they have become heir to much of the haze of misinformation, prejudice, and emotionalism surrounding issues of public discussion.

The Pulse of Democracy is an attempt by a well-known director of public-opinion polls and one of his assistants to cut through much of the existing ignorance and skepticism by describing the operation of such polls and by discussing several of the criticisms directed at them. Simply written, the technique of exposition runs to the statement of a few general principles followed by one or two illustrations. As a result, the book will leave many who are seriously interested in polls unsatisfied because of the relatively meager and elementary treatment accorded each of its three foci: explanation of the mechanics of polling, review of some types of poll results, and appraisal of the role of polls in a democracy.

We are told briefly about the theory of sampling and about the importance of obtaining samples that are representative and of adequate size in order to reduce to a minimum the range of error to which results may be subject. But such principles are undisputed.

The controversies center around how to translate these general directives into numerical interview quotas for specified geographical points and around the extent to which existing polls approach these criteria of reliability. Unfortunately, concrete data relevant to these major problems are not provided, either in the text or in the appendix.

We are never told where Gallup's American Institute of Public Opinion obtains its interviews, geographically, nor is the size of sample given even for one study. Information about the actual distribution of interviews among various population groups is missing as is any presentation of how subgroups are combined into totals.

Scientific judgment is forced to withhold its evaluation of polls until facts such as these are forthcoming, for neither sincere purposes nor occasional demonstrations of accuracy are adequate assurance of the absence of weaknesses which may already be affecting many results and which may increase errors in the future.

AFTER ALL, Gallup himself seems uncertain enough of the accuracy of his normal operations to multiply the size of his sample and to extend its geographical coverage when his results are about to be checked directly, as is the case with election forecasts.

How large is the resulting gain in accuracy? Does such an improvement cast a shadow on week-to-week poll results which cannot be checked? Under such conditions, the success of past election predictions is tangential to the question of how accurate the Gallup polls are regularly.

No one knows what the correct answer may be on polls where no actual vote is held. But when polls are in substantial disagreement, as were the Gallup and Fortune polls recently on the question of aid to Great Britain, for example, there seems to be a clear-cut need for more information about such operations, especially since their very success in gaining prominence and influence vests them with a public interest.

Consider the handling of another problem area—poll questions. Again, there is a presentation of the general principles governing the selection of issues, their wording as questions and their testing in field interviews. And again, the heart of the difficulties is found in trying to carry these ideals into practice.

Everyone agrees that a question should be unbiased, but just how scientifically is the degree of bias determined? How is a choice made among the large number of questions which are undoubtedly subject to trial? How is a choice made among the many questions which are asked in regular Gallup polls, since some of the results are never published? What machinery is provided for discovering the issues about which people are most concerned?

ANOTHER PROBLEM which is central to the setting up of questions concerns the range of alternative answers provided. The restriction of answers to the "Yes," "No," and "Don't Know" type of categories seems unnecessary and may even be distortive except where other alternatives are nonexistent, as in the case of elections. Legislation, for example, is subject to amendments which may change both its objectives and methods. Its final definition by Congress is responsive to the will of the electorate not merely as "Yes-No" reactions to the original bill and to the final one, but to suggestions for modifications at any stage. What data are available to support the procedure now used?

Many similar questions must be answered if polls are to be evaluated soundly.

We are told, for example, about the crucial role played by the interviewer—that he must be impartial, must follow out all instructions regarding the selection of persons to be interviewed, and the manner of eliciting and reporting responses. How are such people selected? How are they trained and supervised? What are their biases? How much has their judgment been checked in the field as regards their choice of a sample, their wording of questions and possible explanations, and their writing up of interviews. A serious loophole could exist here. How successfully has it been plugged up?

Although considerations of maintaining general reader interest excuse omissions of detailed technical material, it is regrettable that many of the problems left out are those which most seriously challenge the reliability of polls. These are points where Dr. Gallup's tremendous experience could be used with powerful effect toward turning doubts into acceptance.

DISCUSSION OF THE ROLE of polls in a democracy is really the major point of the book. Other segments are fitted together primarily in terms of their contributions to this overriding problem.

Polls are being called "the key to effective democracy"; they are also being called "pernicious" and "dangerous." Polls are inherently neither of these; they can be harmful and they can be an effective tool of democracy. Dr. Gallup's discussion of the useful purposes to which polls can be put is interesting and enlightening.

He mentions their value in defining the mandates of elected officials, in providing a species of direct primary, in measuring sentiment on issues of interest to legislators and administrators, and in providing more authoritative determinations of social values and morals than can be obtained through reliance on those who think they know the public mind.

As a parallel to this statement of positive contributions, there might well have appeared a thorough discussion of the abuses and dangers that such polls might generate. For example, Gallup might have pointed out that polls could be misused in the interests of specialized views—more often by omission of certain issues, or of particular aspects of them, or of special subtotals making up the over-all results than by deliberate manipulation of reported results.

The public welfare is urgently in need of safeguards against the channels of possible abuse. Dr. Gallup's experience in policing his operations against the various hazards must have persuaded him of the need for some kinds of protective controls. Which ones would he suggest as most desirable?

PUBLIC OPINION polls can be of great service. They cannot be the savior of democracy. Democracy's fundamental problems lie elsewhere. But polls can provide reliable, important information concerning the state of public opinion on questions of importance to the people and can therefore be of tremendous value to Government administrators, legislators, and public bodies of all kinds.

The effectiveness of their contributions will be very definitely limited by the extent to which the competence and impartiality of pollers are authoritatively assured. But their effectiveness can be increased most of all only through an extension of the popular availability of complete, trustworthy information on issues and through an extension of people's experience in participating in democratic processes.

Dr. Gallup deserves much gratitude for his part in helping to develop polls to the point where they are a force in representing public opinion. *The Pulse of Democracy* is an elementary introduction to some simple problems rooted in the large-scale operation of public opinion polls.

√ *For your attention*

ESTIMATING LIVESTOCK RECEIPTS AT PUBLIC MARKETS. Knute Bjorka. 37 pp. Washington, D. C. Department of Agriculture, Bureau of Agricultural Economics. Processed.

Includes a discussion of the purpose and history of estimates of livestock receipts, study of advance estimates, methods of making estimates and errors in estimates, and conclusions and recommendations. Statistical tables showing results of the study are presented in an appendix.

FOREST OUTINGS. By thirty foresters. Russell Lord, Editor. 311 pp. Washington, D. C. Department of Agriculture, Forest Service.

Through illustrations and narrative this account takes the reader over the country and points out its still untouched natural wealth and beauty. The volume is at once a plea for the conservation of our resources and an invitation to seek repose and refreshment of spirit in the solitude of our forests.

ACHIEVING A BALANCED AGRICULTURE. How the National Farm Program Meets the Changing Problem. 74 pp. Washington, D. C. Department of Agriculture, Office of Information. Issued September 1934. Revised April 1940.

In the years that have intervened since this pamphlet was first issued the problem of achieving a balanced agriculture, though fundamentally still the same, has changed in some of its aspects. This publication is designed to state the underlying farm problem in terms of the present and to describe the National Farm Program as it is now operating. There are discussions of the farm problem today, how agriculture became unbalanced, the struggle for equality; the rise of economic democracy on the farm; aims of the national farm program; the ever-normal granary; putting abundance to use; saving soil, water, grass, and trees; farm homes and farm families; progress under the farm program; and facing the future.

FOREST LAND TAXATION IN MICHIGAN. Alf Z. Nelson. 46 pp. Washington, D. C. Department of Agriculture, Forest Service. 1940. (Forest Taxation Inquiry, R. Clifford Hall, director.) Processed.

During the 10-year period, 1929–38, the tax system of Michigan experienced extraordinary changes and developments. This report, after a review of Michigan's forests and forest industries, of the property tax and the 15-mill tax limitation amendment, proceeds to a discussion of trends in the tax burden on rural land, the local forest tax situation, and the effects of special forest tax legislation.

RURAL POPULATION DENSITY IN THE SOUTHERN APPALACHIANS. Francis J. Marschner. Misc. Publication No. 367. U. S. Department of Agriculture. Washington, D. C. 18 pp. 1940.

The distribution of population density in the Southern Appalachians, in its extreme occurrences of concentration and sparsity, is shown by Mr. Marschner to be largely controlled by and related to the physiographic character of the region and the location of its mineral resources. One feature of the interplay of natural, economic, and social factors that affect density of rural population is apparent—the frequently observable tendency of the rural population to congregate more closely in areas poorly adapted to arable farming than in areas of better land.

STATE FOREST TAX LAW DIGEST OF 1939. Louis S. Murphy. 52 pp. Washington, D. C. Department of Agriculture, Forest Service. 1939. (Forest Taxation Inquiry (R. Clifford Hall, director).)

A complete revision of digests previously issued by the Forest Taxation Inquiry, this digest "is intended to give in ordinary language the essential features of the forest tax laws" in effect on October 1, 1939. It includes also a classification of these laws, a historical summary of State forest tax legislation, 1819–1939, and potential and actual application of current forest tax laws.

THE CHURCH AND COOPERATIVES. Benson Y. Landis. 16 pp. Federal Council of the Churches of Christ in America. New York. 1940.

Cooperatives are found in 40 nations with 150 million members. They engage in all kinds of activities—production, credit, marketing and purchasing. The purpose of this manual is the practical one of giving illustrations of what church people have been doing in many places, by various methods, to assist cooperatives. It presents useful information and guidance for ministers, layworkers, church groups, interested in some aspect of the economic cooperative movement. Mr. Landis says that many church people believe the co-op way of doing business is of a high ethical quality. It commands their loyalty. They are convinced that this kind of business has a bright future.

We are interested in agriculture not because we are more interested in the farmer than in the mine worker and the men of the factories, but because not only this Nation, but, so far as we can contribute to it, the nations of the world must be fed, and the foundation of the physical life of every nature is found upon the farm. Therefore, it is out of the question to neglect this fundamental consideration of our life.

—WOODROW WILSON

LETTERS

. . . Is there any possibility of getting reprints of that pertinent little article, "The Geese and the Golden Eggs" . . . It will be useful in my teaching work.

F.B., MINNEAPOLIS, MINN.

I think the Land Policy Review is a refreshing change from many things, including the average Government publication. I like your attitude of trying to present all sides of the case, let the chips fall where they may.

There are several articles that I should like to see printed; no doubt you have thought of them. It seems to me that something should be said about the place of women in land use planning. Farmers talk a great deal about the use of land for this or that purpose, but we often forget that when women are interested a lot can be done—in running the home more efficiently and pleasantly. Maybe cheaper, too. And they can do a lot about vegetable gardens.

S. P. M., OSAGE, IOWA.

I read your magazine with great interest. The idea of putting it out every month is good. Do you, I wonder, print enough articles about the South?

MRS. G. G. O., HAZLEHURST, GA.

It seems to me that Land Policy Review avoids a lot of issues. Too much of it is by men in Washington; you should have something by farmers and what they think of new-fangled programs.

C. O. C., ALBUQUERQUE, N. MEX.

U. S. GOVERNMENT PRINTING OFFICE: 1940

In this time of national emergency, when the people of this country are determined to protect our land, our ideals, and our way of life against all aggression, national unity is necessarily the foundation on which we must build total defense. It is the foundation on which we can build for peace through preparedness.

In the development of national unity, farmers are leading the way. They had long experience and had made great progress in the development of agricultural unity long before the threat of aggression endangered this country.

One of the reasons why national unity is so important is that no matter how successful we are in keeping conflict away from our shores, we cannot escape the effects of conflicts taking place in other parts of the world. The war, which day by day engulfs more of the Eastern Hemisphere, affects the commerce and the security of this hemisphere. It is upsetting the whole world economy in which this Nation has played such an important part.

—Claude R. Wickard

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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ECONOMICS

Editorial Notes
AND EXPRESSIONS

CONTRIBUTORS TO THIS ISSUE: PAUL H. JOHNSTONE, social psychologist and historian in the division of farm population and rural welfare, has a doctor's degree from the University of Minnesota. He wrote *Somewhere Else* for LAND POLICY REVIEW a year ago. DR. WILLIAM T. HAM, a member of the same division of BAE, specializes in problems of farm labor.

LOUIS H. BEAN, head agricultural economist in BAE, is the author, among other works, of *Ballot Behavior,* reviewed in this number. The book, based on studies that Mr. Bean has conducted as a hobby, has attracted wide attention.

ESTHER MARIE COLVIN, an editor in BAE, won the third award of the Martha MacLear Poetry Group of the Washington Branch, American Association of University Women.

G. H. AULL heads the department of agricultural economics and rural sociology of Clemson Agricultural College, South Carolina.

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WILLARD W. TROXELL, who contributed an article last January in LAND POLICY REVIEW's series on migrants, is an industrial economist whose work concerns land institutions and values and land use adjustment measures. HARRY J. VOTH is senior statistical clerk, division of land economics, BAE, Portland, Oreg.

DR. O. C. STINE is in charge of the BAE division of statistical and historical research.

MONT H. SAUNDERSON works in the field of forest economics at the Intermountain Forest and Range Experiment Station, Ogden, Utah.

IN LATER ISSUES: A. C. HOFFMAN, principal agricultural economist in the BAE division of marketing and transportation research, discusses the interesting subject of food technology and land use. V. KATKOFF, a graduate in agricultural economics of the University of California and author of several works about Russian agriculture, has written a timely article on Soviet agricultural insurance.

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Grass Roots AND FAR HORIZONS

By PAUL H. JOHNSTONE. *Grandfather's farm was self-sufficient, independent, secure. Its people were serene and happy. Life there was simple and satisfying. Its 160 acres grew fruits, grains, nuts, wood, vegetables, even peanuts and tobacco. Why can't we return to it, and to that idyllic life?*

My Grandfather was a farmer in southern Iowa. I still remember the farm and the household from the long visits made there when I was a small boy and Grandfather and Grandmother were quite old. Even 30 years ago farm life was much different from what it had been a generation or so earlier; but my grandparents were oldfashioned folk who lived as much as they could within the pattern of the customs and ideals that had prevailed when they were young, and so I got at least a fleeting glimpse of a world that was passing then and now is almost entirely gone.

Their farm had 160 acres of rich, rolling land. Thirty or forty acres were heavily timbered. The rest was in pasture or under cultivation. There were at least a few specimens of every common farm animal and fowl: Horses, cattle, hogs, sheep, and even goats—I remember one goat so much petted that he had even learned to chew tobacco—and chickens, turkeys, and geese, with guinea hens to scare the hawks away.

Near a big orchard, with several varieties of apple, cherry, and plum trees, was a patch of currant and gooseberry bushes, with strawberries and raspberries and grapes just beyond. A big garden, carefully tended, produced almost every vegetable you can name offhand, and even peanuts and tobacco.

Not far from the kitchen door, Grandmother kept a small herb garden where mysterious plants flourished that, wisely administered, could cure everything from chilblains to rheumatic fever.

The fields were broken up, although I don't believe Grandfather ever used the word "diversification." The pasture was large, with a good-sized meadow of wild hay, but the land under the plow was cut up into a dozen or more plats. The cornfield, the biggest, never exceeded 15 or 20 acres. A few acres were planted to potatoes, oats, wheat, barley, clover, beans, peas, one or another root crop, perhaps some flax or buckwheat, and melons and squashes. Pumpkins were always planted with the corn. Wild cucumbers climbed the fence along the road.

The barnyard included a little smithy where Grandfather shod his own horses. A combination root and cyclone cellar back of the house had a smell of stored potatoes and carrots, turnips and rutabagas, and moist earth, that I can remember even now.

The smokehouse I can still see—though it has long since been torn down—hung thick with hams and shoulders, and sides of pork. Nearby, and turned over to keep the rain out, was the big iron kettle used to make soap. In the granary was a bin for black walnuts gathered every fall as regularly as the corn was picked. And a row of beehives under the trees in the orchard supplied sweets for the family.

Grandfather and his family had few needs that the farm did not supply. They bought flour and salt and coffee and a few other minor items for the kitchen.

Simple Machines, Simple Amusements

But when they wanted meat they killed a chicken, got ham from the smokehouse, or dug for sausages sealed in lard in big jars in the basement. Vegetables came from the garden, or, out of season, from the root cellar or from bins of sand. And there were barrels of apples and long shelves lined with home preserves.

Fuel came from the big wood pile, at the cost of cutting and hauling in from the grove south of the barnyard. Grandfather used to make his singletrees and doubletrees from the hickory that grew there. Once when he needed some lumber for a small building job he had logs from the woodlot sawed into boards on shares.

Kerosene for the lamps had to be bought, of course, and paint now and then for the buildings. Occasionally some implement broke, or wore out so completely that there was nothing to do but buy a new one. But that didn't happen often. Most of the machinery was simple, well greased, sheltered when not in use, and easily repaired in the little smithy when minor breakdowns occurred. A two-bottom gang plow and a binder were the heaviest and most expensive machines on the place.

Amusements and social life were inexpensive, centered around the little church and the one-room school that stood facing each other across the road a couple of miles away. On Sunday mornings, when the chores were done, everyone drove off to church. After the service, if the weather was good, most people stood around and talked for a long time. After that, either you had people in for Sunday dinner, or you went to their place. In the drowsy afternoon the youngsters played, the grown-ups conversed, and the old folk dozed until it was time to go home for the milking. Parties and picnics, literary society meetings, and church suppers ran through the year, with quantities of popcorn and apples or cider and doughnuts or fried chicken and home-made ice cream, according to the season and the occasion.

There was plenty of fun. But seldom was there any that cost money, although the women frequently had lots of cooking to do.

The Successor Fails

Grandfather's farm was operated as a place on which a humble family could make a modest but secure living. It was a good farm. I suspect that in the spring of 1920 it might easily have sold for $400 an acre, perhaps more. Yet the man who owned it in 1920—a very hard-working and capable farmer, by the way—lost possession of it not many years later and became a tenant, whereas my grandfather, who I believe never once saw as much as $400 all at one time, lived on that farm in untroubled peace and security until he died.

Let me emphasize right here that, as far as I can judge, the man who lived a contented lifetime of unthreatened security on that farm was no better a man, and no better a farmer, than the one who later lost it. The times had changed, not the quality of the men.

I suppose Grandfather was really very far from being a highly efficient farmer. He never bought good seed except for a very few things, like clover. Mostly, he saved out his own seed each year. His sires were far from being prize winners. He would never plant potatoes in the light of the moon, and he had many other superstitions. He hated the idea of banks and credit. Of all his tasks, he liked buying and selling and business transactions the least. He did not keep books. He would have thought you had funny, outlandish ideas if you had asked him what his farm plan was.

The Only Plan—Unwritten

Yet he had a plan, although it was never clearly expressed, let alone being written down. It was to produce everything possible on the farm to supply directly the family's needs, to reduce all need for things the farm could not produce, and to grow enough extra to be sold, to pay for the few things that had to be bought.

It was a casual matter to butcher a veal, kill a turkey, or pour a gallon of thick cream into the freezer on a Sunday afternoon. But purchasing as much as 10 cents' worth of stuff at the store and making out a small list for the mail order house were matters to be carefully weighed. Grandfather never had much cash. He never needed much.

To my knowledge, there was never a time, after Grandfather was fully settled on that farm shortly after the Civil War until he died in 1914, when anyone there ever felt so much as the slightest qualm of insecurity. There was always abundant food, adequate shelter, plenty of fuel, and sufficient clothing. Life on that farm was humble, but it afforded a rich chance for happiness. It was, above all things, secure.

It was secure because it was independent—almost completely independent of everbody else and everything else. No matter what anyone else did, no matter what happened anywhere else, life was serene and undisturbed. Life at the grass roots was untouched by events beyond the horizon. That is why Grandfather and his family were so secure. If ever there had been any real lack of the necessities, it would have been easy to see the cause, for everything that had anything at all to do with supplying the material wants of that family took place under everyone's eyes.

Prosperity depended only on what the family did to help itself. To get a break with the weather helped, of course, but it was a fairly humid country, and a good carry-over of grain and hay was, ordinarily at least, sufficient insurance against most natural hazards.

So the folk on that farm didn't have to worry much about what other people did or what happened somewhere else. There were indeed times when no luxuries were bought. Pants were frequently patched when new ones might have looked better; but the worst that could happen in time of depression was that a few nonessentials would be dispensed with.

A Haven From the World

Grandfather's farm was, in fact, a haven from the great world outside. In a sense it amounted to a Social Security Board, a Farm Security Administration, an unemployment and disability insurance program, and a WPA. The social functions that in this later age have been performed by public agencies of relief and rehabilitation were accomplished with greater readiness and ease and efficiency than the new and formal institutions for these purposes have yet been able to achieve. For that farm was an institution of economic resilience and social safety that was the culmination of many centuries of evolution toward an ideal of serene and decent security.

Life on that farm when I was a small boy was a good life, sweet to remember, and it was so far removed from the social ills and problems we face today that it sometimes seems hard to believe that such completely different states of things could exist so close together in time.

Nothing perhaps would seem more simple, or more direct, or more complete an answer to the ills that now assail us than to return to that kind of life.

And because so many of us are sensitive to the beauty and the harmony of the kind of life my Grandfather lived, no counsel is more sentimentally appealing than the advice to pick it up again where Grandfather left off.

But is that possible?

Can it be done, here and now, in the world that surrounds us? Can rural people today find security by cutting themselves off from the world, turning their backs upon society, and living completely unto themselves?

Why Can't We Go Back?

We cannot go back to that kind of farm life and security unless we break almost every tie we have with all the world that lives beyond the bend in the road or over the farthest hill.

We cannot do it unless we shatter all our habits and ways of living that are connected in any way with the world beyond the bounds of our own community. And such a course would be vastly more drastic and revolutionary than any upon which a large number of men has ever willingly embarked.

We cannot go back to that kind of farm life and security unless we first give up automobiles and trucks and tractors and telephones and radios and electricity and every other mechanical advantage that modern science and technology have created for us.

For all such things are the products of specialization and of mass-production industry that can exist only if there is beside it a specialized and commercial agriculture to feed and clothe it and supply certain raw materials. And both commercialization and specialization inevitably mean dependence upon others, upon the market, upon a million deeds and events which cannot possibly be influenced and controlled by the same methods and procedures that Grandfather used to influence and control the course of events upon his farm.

We cannot have that kind of subsistence security on the farm so long as only one in four of our total population lives on the farm, or so long as we have 131,000,000 people, for there isn't enough land suitable for widely diversified production to enable so many to make their living that way.

We Cannot Remain Separate

Many and vast areas that have an important and legitimate agricultural place in an interdependent and specialized economy cannot possibly support the subsistence kind of agriculture upon which Grandfather based his independence. If they were forced to choose between self-sufficient agriculture and no agriculture at all, they would have to choose none at all for ecological reasons alone.

Yet in a system of economic specialization, in which areas and groups concentrate on the production of those particular goods that they are well endowed by nature and custom to produce efficiently, they have a definite and important place in the total economy.

Even if it seemed possible for large groups of us to forsake our function as parts of the whole—even if, as might well be the case for relatively isolated individuals and communities, we saw a chance now to turn our backs to the world, and let it go its way while we go ours—we could not long succeed: All of us are essential parts of an interdependent economic and social machinery that in the long run simply will not let us be separate and independent.

We couldn't remain unaffected by the outside world, merely by wishing to, any more than the small neutral nations of Europe could remain unaffected by the European war merely by wishing to.

Grandfather bought this farm originally, at least so family tradition has it, for $1.25 an acre. The house and the other buildings on the place were constructed, a little at a time, largely by his own labor, and at least in part from materials off his own land. He never had to go into debt. He never had to lay out much cash. When he first drove west from Ohio, all of his original capital was in his pocket or in his wagon.

Suppose the same young man were starting out from Ohio today with a team, a wagon, a plow, a few tools, a cow, and $200 in his pocket—where would he find a rich quarter section of Iowa land for $1.25 an acre? He'd have to lay out about $100 an acre, which is $16,000—a tidy sum for a young fellow of 21 to start life with. And our social problems today can hardly be said to center around young men with $16,000.

If, however, a young man who wants to establish himself on such a farm could induce some capitalist to lend him enough to buy such a farm, and then to equip and stock it well enough to have any chance to pay out, he would be loaded at the very beginning with a debt of at least $20,000, which he would have to pay back with interest.

By the very best terms he could ordinarily hope to get, he would have to lay out in cash at least $1,500 annually on amortization, interest charges, taxes, and necessary insurance and upkeep. And to whatever extent he wanted or felt he needed a telephone, electricity, an auto or tractor or truck, and all the things that go with them, to whatever extent he ever wanted to see a movie, or attend the state fair, or improve his crop yields by better seed, he would increase his need for ready cash—cash on the barrel head.

It is perfectly apparent that he could not possibly meet his obligations and at the same time retire from the world and get the kind of subsistence security that prevailed on Grandfather's farm 25 or 30 years ago.

He would need cash to a degree that Grandfather never did. He would simply have to make himself a part of the whole national economic machine, rather than a complete and wholly independent little economy in the way my Grandfather succeeded in doing.

All this may seem merely an elaboration of the obvious.

And yet I wonder if we know it as well as we think we do. I wonder if we are willing to accept fully the implications of these things. We recognize our social and economic dependencies when they are pointed out. We are willing to admit (when we must) that, as individuals or groups, we are hung as by our teeth to a whole whereof we are but parts. Yet when we act, we insist most of the time upon acting as autonomous groups and individuals who succeed or fail regardless of others and regardless of the working of the whole.

Now: The Industrial Revolution

We form into pressure groups, each intent on making its own share of the gravy the biggest, when actually the crucial matter is the total amount of gravy—and that can be increased only by better teamwork and a higher degree of coordination of parts.

The Industrial Revolution, which men have been talking about for a century, is just beginning to be felt in its full force. Its overwhelming social effect has been to make us dependent on one another.

Up to now we have observed the technological progress that passes under the name of the industrial revolution without any real comprehension of its inevitable social implications. Most of us have been inclined merely to marvel at the applications of modern science and to accept their material blessings with never so much as a suspicion that drastic alterations in our ways of living together would eventually have to follow. And so, with ideas and institutions that derived from an earlier age when the economic independence of the individual, the family, or the community was not only a possibility but a common and working reality, we have plunged as fast and as far as we possibly could into a condition of extreme economic specialization that has almost completely destroyed the real independence of every individual, every family, and every social group.

There can be no question that the individual in modern society is entirely at the mercy of things and events over which, as an individual, he has no control. He cannot get a job, he cannot hold a job, he cannot get a farm, he cannot hold a farm, he cannot be secure in the possessions he has nor aspire to others, without the favor of events that he has absolutely no power, by the older, individualized techniques, to determine.

His personal fate and the fate of all his family depend precariously upon remote, unseen events.

This is as much true of groups, of particular interests, of localities, as it is of individuals. An endless chain of dependency has been created that is partly a matter of finance, partly a matter of organization, but always is based upon the specialization resulting from modern technology. This condition has converted industries and groupings that are nominally independent and entire into mere cogs in a vast and complex economic machine.

A Connecticut town is left stranded and helpless if something happens to a Michigan industry that it supplies with tools. The workers in a Pennsylvania steel mill have jobs or not, depending on who gets the bid to build a Mississippi River bridge. A county in California cannot possibly prosper beyond the extent to which urban workers 3,000 miles east of them have money enough to buy lettuce and oranges.

Our Skills, Too, Are Limited

Our economic dependencies are only a part—though perhaps the most crucial as well as the most obvious part—of dependencies that extend through every phase of our lives. The field of our individual competence of judgment has narrowed in proportion as the collective knowledge of mankind has broadened. There was a time when a well-informed, practical man could have a respectable understanding of all of the crafts, processes, and products that contributed to his everyday living. But this kind of universal knowledge has long since ceased as a human possibility.

As far as comprehension of the dominant activities and forces in our lives is concerned, we live partially and by segments. We experience only a very few of the complete processes that are essential to us and comprehend only disjointed parts of things. We get corn out of cans, shoes out of a box, and automobiles out of show windows. In most cases we do not know their origin, or how they got to us. Our dress, our recreations, most of our possessions are determined by remote unknowns and come to us in a pattern cut to fit the multitude. Even the thoughts we think, along with the goods we consume, are the mass-production product of a machine age.

Buying and Getting, We Lose Our Powers

Grandfather had control of all of the economic factors and forces that affected him and his family. They enjoyed the direct rewards of their own labors; they succeeded or failed according to their own efforts. When troubles developed or difficulties arose, their causes were sure to be found right there on that farm.

But the world has changed.

Whether we thrive or fail depends on the price of the cotton, the wheat, and the potatoes we sell, and on the cost of the clothing, the fuel, and the machinery we have to buy.

It depends on markets in Minneapolis and Chicago, in New York and Liverpool.

It depends on stock exchange transactions and financial manipulations in La Salle Street and Wall Street.

It depends on whether Pennsylvania miners and New York garment workers have money to buy our beef.

It depends on whether some foreign country decides to buy our wheat or sets out to raise its own.

It depends on freight charges and interest rates.

It depends on the price we must pay for tractors and combines and gasoline and overalls and Diesel oil and cotton cloth. And it depends on whether factories and mines keep open or whether they close because no profits are in prospect for those who control them.

We Have Tried to Pretend

And we can't control these things by plowing closer at the corners or by putting on extra manure or by planting 10 more acres of wheat. The farm family with a feed bill to pay, fuel to buy, mortgage payments to think of, can meet those obligations only to the extent that outside forces permit. They cannot, by their work on the farm, set the prices of wheat or beef or overalls or lubricating oil, or establish the interest rates.

Our insecurity has arisen from the fact that although we are plainly dependent upon outside forces over which (as individuals and as small groups) we have had no control, we have continued to act a good deal of the time on the assumption that we could attain security merely by doing the sort of things that gave us security when our condition was truly independent.

We have tried to pretend that we were not dependent upon the outside world. We have tried to convince ourselves that if only we could exercise the frugality and hard work of our grandfathers we would be as independent as they were, overlooking the fact that, unlike our grandfathers, we are tied to each other and to the whole world.

There is no reason why the specialization that has made us so interdependent should be calamitous. There is, in fact, good reason to believe that this specialization in the long run should make us richer in material goods and more secure. But it will never obtain security for us if we continue to act upon the assumption that we are not members of a team. It will never make us secure so long as we persist in acting as though the distress that is brought about fundamentally by remote causes can be cured by purely local measures.

Indeed, a great real can be done locally by individuals, by communities, by counties, and by States to relieve the hardship and suffering that afflict so many people.

No doubt many practices common on my grandfather's farm that have been forgotten or neglected, if practiced today, could bring to many rural people at least some small degree of added security.

Grandfather's Way Can Cure Symptoms

Many a farm family today could improve its level of living by increasing its degree of self-sufficiency at least to the point of providing more of its own food—more home dairy products, more products from the garden, more preserving of fruits and vegetables, more curing of home-grown meat.

But while such measures may sometimes relieve the symptoms, they ignore the cause.

We have got to deal with causes, and think in terms of the whole. We have got to find means to control and to direct those outside anarchic forces which now prevent individuals and small groups from attaining security through their own efforts and by their own industry and brains and thrift.

We must find devices by which to control external influences enough so that individuals have a decent chance to earn their own security. This can't be done by single individuals acting alone, nor can it be done in this great country by the isolated actions of small groups or localities. It can't be done, either, by preachments concerning the virtues of industry and thrift.

Order in Anarchic Economics

It's silly to tell men to work hard when they can't find a job, when there are millions of unemployed. It's silly to tell a young man to work hard and be a good farmer when he can't start farming without capital that he hasn't got and can't expect realistically to acquire with the opportunities before him.

We have got to develop, democratically, policies on a national scale that will bring meaning and order into an anarchic economic system. We have got to see to it that some means is found for keeping factories going that are 20 or 2,000 miles away, for those factories are as vital to the prosperity of farmers as their own farms.

Only when there is a rational coordination of the whole national economy, in which we all share, will we be free from the effects of outside events. And only when that is accomplished will the local measures of local groups bring the full benefits we hope for.

We must increase employment in industry, and make factories keep going. We have got to develop over-all controls that the people may command and that will give the people the same control of their national economy that my grandfather had over his individualized and independent economy. But we will never get such progress until the mass of people understand the need and insist upon the necessary measures. The impulse must come from the grass roots, but the people at the grass roots must know the importance of what lies beyond far horizons.

We are rapidly approaching a crisis that too many people have as yet no real understanding of.

We are inexorably headed toward an increase of deliberate controls over our economy. That is as sure, in the long run, as the fact, now evident beyond all debate, that our intertwined, specialized economy is as a whole stronger and more dynamic than any of its parts.

Who Will Control Our Economy?

Henceforth the only issue can be, Who will exercise these controls, and whose interests will they serve? Can we, in a rational and democratic manner, perceive our dependencies, and, on the basis of such a broad understanding restore to the mass of men the control of those economic factors that the progress of the industrial revolution has, up to now, taken from them?

Or will we use the controls, already privately established in many cases in the forms of trusts, monopolies, trade associations, and so on, to strengthen the position of the few who now benefit, comparatively, by a "system" that permits them to exploit, for their private profit, crucial parts of an economy on which we are all dependent?

For a time perhaps, we may still ride along on the impulse from the past, and be as complacent as we wish about unemployed men, idle factories, dispossessed farmers, and declining opportunities for a surplus rural population. But we should remember that the assumption of the gradualist must be that changes are made as ills arise. When they accumulate, we are headed for trouble. Distress and confusion, from which so many of our people have suffered, if long continued, eventually will lead to a state of desperation that may well bring a violent kind of solution that no one in a calm moment would contemplate.

> *When tillage begins, other arts follow. The farmers, therefore, are the founders of human civilization.*
>
> —Daniel Webster

And if we do not fairly soon find rational and democratic methods to solve the over-all problems that have created so much trouble locally in every county in the nation, we may find ourselves headed for the kind of violent solution that the countries of Europe have been forced into by essentially the same set of problems.

Defense of Democracy

The only defense of democracy is to make it work so successfully for the benefit of the mass of men that they will be willing to die rather than give it up.

When it fails to provide opportunity, when it long allows conditions to prevail that destroy the efforts of common men to attain security and humble decency, when it drives millions into a position that makes them feel that society has no place for them, when it worships the past too much and allows established privileges and outworn economic theories to prevent practical reform of real and immediate problems, then democracy is on the way to committing suicide.

That happened in Europe. And that is what we must avoid in America.

Land and Work Chances

For the Lowest Third

By LOUIS H. BEAN. *The expected rise in industrial activity and national income as a result of greatly increased defense expenditures has a direct bearing on rural welfare. What are the prospects of an improved rural level of living, of a better distribution of income among farm families? An answer is given here. It is none too reassuring, but it sets out one of the most important tasks before us.*

AT THE OUTBREAK of the present war, it was clear that our foreign markets for farm products would be further restricted, and that the problem of surplus manpower in the South and Middle West would be intensified. It appeared also that urban industries, even at the quickened pace stimulated by the war, would not absorb all the urban unemployed, to say nothing of surplus agricultural labor. This situation logically pointed to the need for a rural works program to provide jobs for the excess rural manpower to conserve our natural resources. The answer to both rural and urban unemployment was the greater utilization of private capital, of government capital, or of both.

To some extent this situation has been altered by the defense program. It has already stimulated industry and raised the demand for some agricultural products. It is moving some agricultural as well as urban labor into military activity and into work financed by defense expenditures. What the total effect will be we cannot yet foresee. But it will not lead to the complete absorption of surplus agricultural capacity or of surplus agricultural labor. We shall still have these twin problems.

Suppose the Government spends for defense purposes $5,000,000,000 for the fiscal year 1940–41 and $10,000,000,000 for the fiscal year 1941–42, in addition to its previous provisions for defense activities. Along with this program will necessarily go an increased flow of private capital into plant and equipment. Together, the public and the private investment will induce a marked increase in the production of durable goods. It will also bring about an increased demand and an increased production of goods for current consumption. As a result, our industrial production in 1942 may be fully 20 percent greater than the average for 1940. This could bring the employment of persons in nonagricultural pursuits up to 40 million or 41 million, as compared with about 36 million persons at present. It could raise the national income to about $90,000,000,000.

These figures obviously have an important bearing on the problem of surplus agricultural labor. Employment now in all nonagricultural activities is practically the same as it was in 1929. It is approximately 10 million persons greater than at the bottom of the depression in March 1933. Hence, the problem of nonagricultural employment is to absorb the increase in the working population since 1929. The defense program, if it stimulates employment of 4 million to 5 million additional persons by 1942, will go a long way toward absorbing the urban unemployed. But it may not go the whole way. There will still remain the problem of rural unemployment, even though some rural people will be drawn into defense jobs and defense-stimulated activities.

Defense May Not Remove Farm Labor Surplus

Between 1930 and 1940, as a result of population growth and reduced cityward migration, the working population on farms increased by about 1,600,000. Meanwhile, the decline of the demand for export crops reduced the need for manpower on farms. It is unlikely that the defense program, at any rate within the next year or two, will absorb any substantial part of this excess rural manpower, except to the extent that it draws on unemployed rural rather than on unemployed urban labor.

It should be borne in mind, however, that the distinction between urban and rural labor is nowadays by no means sharp. There is a constant interchange of personnel between town and country. Thousands of persons on farms have worked in cities at some time or other and thousands more through their experience with machinery and otherwise are good material for urban employment. It is desirable for many reasons, among them the advisability of decentralizing industry as much as possible, that rural labor should share in the opportunities created by the defense program, and undoubtedly in some measure it will. Nevertheless, the fact remains that, on a net basis as far as we can see now, defense industries in the next couple of years or so will not make any large inroad into the surplus of rural manpower.

In 1942 the total labor force of the country may be 58 million. One of several assumptions that may be made is that the employment of nonagricultural labor may amount to 40.5 million persons. That would leave something like 17 million persons to be employed or accounted for in the other lines. Some 12 million people are in agriculture.

2,000,000 Too Many Farm Workers in 1942?

Without considering from a social standpoint what would be the proper number of persons on farms, it may be observed that perhaps not more than 9 million or 10 million are needed to produce for the domestic markets and for diminished exports. Reckoning by this process of rough approximation, we shall have a surplus labor problem of about 7 million persons in 1942, of whom 1.5 million may need to be retained on relief work, 1.5 million may be inducted into military service, while about 2 million may be considered to represent the normal unemployment even of prosperity years, and about 2 million will be surplus labor in agriculture.

This last figure assumes that some withdrawal of farm youths into industrial and defense programs will take place. The industrial activity that is being developed by the defense program will undoubtedly draw some labor from the farms, and military enlistments also will do so. These withdrawals will reduce the surplus farm labor force; they may check the increase in the population on farms, and in a year or two may reduce it moderately. But what will happen if industrial activity declines after 1942? Some of the former rural labor will go back to the farms. Added to the remaining surplus of rural manpower, it may help to cause another farm crisis. While our major task at the moment is to build up our defenses as quickly as possible, at the same time we ought to develop safeguards against a possible let down from the 1941–42 defense efforts.

If the national income approximates $90,000,000,000 in 1942 compared with nearly $75,000,000,000 in 1940, what is likely to be the accompanying money income of farmers? Farm cash income with Government payments may amount to $9,000,000,000 in 1940.

Export Recovery Is Not In Sight

This may be compared with $4,682,000,000 in 1932, and $11,221,000,000 in 1929. Moreover, the prices paid by farmers for goods and services were lower in 1940 than in 1929. The 1940 money income of farmers had a purchasing power about 80 percent greater than that of 1932 and about 5 percent greater than that of 1929, barely enough to offset the increase in the number of persons living on farms.

TABLE I.—*Distribution of gross farm income in the United States, 1899 and 1929, in each of 10 equal groups of farms, arranged according to size of income*

Group	Percent of farms	Percent of total gross income from farm production		
		1899	1929	Difference
1	0– 10	0. 8	1. 1	+0. 3
2	10– 20	1. 9	2. 3	+. 4
3	20– 30	3. 3	3. 0	–. 3
4	30– 40	4. 7	4. 0	–. 7
5	40– 50	5. 6	5. 2	–. 4
6	50– 60	6. 9	6. 5	–. 4
7	60– 70	8. 9	8. 9	0
8	70– 80	11. 8	11. 5	–. 3
9	80– 90	16. 4	16. 3	–. 1
10	90–100	39. 7	41. 2	+1. 5

(Derived from Census of Agriculture, 1899 and 1929.)

Farm cash income from marketings will probably be determined in large measure in the next few years by the purchasing power of domestic consumers. Export recovery is not in sight. In fact, the loss of exports is bound to be an offsetting influence. But even if farm cash income has the usual relation to the total national income, and the present governmental supports to farm prices and farm marketings remain in force, farm cash income from marketings in 1942 may not exceed $10,000,000,000, by very much. Government payments in addition, should they amount to $700,0000,000, will give a total probably not in excess of $11,000,000,000. Part of this advance over the 1940 figure, moreover, could be absorbed by a rise in prices paid by farmers for goods and services.

Thus any improvement that may take place in total farm income over the next 2 years as a result of the defense program will not be great. (This assumes no price inflation.) Whatever the increase, it will be shared perhaps even more disproportionately than usual. Ordinarily half of all farms obtain 85 percent of all gross income from farm production, and the other half receives 15 percent.

With the kind of maldistribution of farm income (which changed very little during the 30-year interval between 1899 and 1929), most of the increase will go to that half of our farmers who produce the bulk of the marketed farm products. And with the loss of foreign markets hitting the South so heavily, the region of predominantly low income farms, there is even less prospect of increasing the share of farm income of the lowest third. There will still be urgent need of nonagricultural sources of income to farmers now living on a subsistence level, and of more industrial opportunities for surplus farm population. The defense program will supply the need in part, but other action will also be required. Especially is there need for more effective collaboration among farm labor and business groups to help more farmers shift from export crops to production for their own home use and more farmers to get nonfarm sources of income.

Even if progress can be made in this direction, farmers in general must have an expanded domestic market and particularly an expanded market among the low-income groups of the urban and rural nonfarm population. Here, too, there is maldistribution of income.

In 1935-36 the lowest third among urban families had 11 percent of the total income available to that group, and the highest third had 65 percent. This may be compared with about the same distribution among farm families where the lowest third received 12 percent, and the highest third 62 percent of the income available to farm families. (Farm income in this case is net after deducting production expenses and including income from nonfarming sources.)

This distribution of income among farm and nonfarm families indicates a potential market for farm products provided the lower third in each group can obtain more income. It may be argued similarly that industrial workers must have an expanded domestic market; they, too, are likely to feel a shrinkage in exports.

Farm People: A Frontier For Expanded Outlets

The farm population, greatly in need of a higher standard of living, is in effect industry's new frontier for an expanded outlet for industrial goods and services. Farmers generally can serve this purpose, however, only if they, too, have a larger income. The key to this all-around increase in buying power is increased balanced production in town and country; and since we are not confronted by any lack of farm production, the problem is basically one of more industrial activity and nonfarming occupations for surplus farm labor.

Effort in this direction would promote progress toward a more even distribution of consumer income, because it is easier to obtain a fairer distribution of abundance than of scarcity.

Yet raising the totals does not cure the trouble automatically. Between 1899 and 1929 the national income quintupled, with agriculture participating in the increase. In that period, the national income advanced from about $16,000,000,000 to more than $80,000,000,000.

In 1899, 33 percent of all the farms had only 8 percent of the total farm income. Essentially the same kind of farm income distribution prevailed in 1929, although the total farm income then was much larger.

In 1929, the lowest 33 percent still had only about 8 percent of the total farm income. At the other extreme, 10 percent of the farms in the highest income brackets had nearly 40 percent of the gross farm income in 1899, and 41 percent in 1929.

Apparently we need to attack the problem of income distribution and the problem of producing more income together, for in the past we have advanced farther toward the latter, than toward the former, objective.

Narrowing the Gap Between Income Groups

This neglect we could indulge in formerly when land opportunities were relatively abundant and when the Nation's savings found outlets

Table II.—*Distribution of gross income from farm production and of incomes of farm, rural-nonfarm and urban families among the lower, middle, and upper thirds*

	Lower third	Middle third	Upper third	Total
	Percent	*Percent*	*Percent*	*Percent*
Gross farm income 1899 [1]	8	21	71	100
Gross farm income 1929 [1]	8	20	72	100
Income of farm families 1935–36 [2]	12	26	62	100
Income of rural-nonfarm families 1935–36 [2]	11	25	64	100
Income of urban families 1935–36 [2]	11	24	65	100

[1] Derived from Census of Agriculture 1899 and 1929.

[2] Based on National Resources Planning Board Estimates of Consumer Incomes.

freely in new private enterprise. But our outlets for internal and external investments are no longer the automatic opportunities they used to be.

Our relations to the outside world have changed so markedly in recent years that we cannot depend on foreign markets any longer to serve as a sufficient outlet for our surplus labor and production capacity. In these circumstances, we can no longer wisely continue to neglect our potential markets among the lowest third within our own borders. It is, in fact, important to develop new internal markets for industrial goods and to create nonfarming opportunities for the farm population that can no longer depend on foreign markets.

Unfortunately, we heretofore have given so little thought to the proper distribution of income and so much thought to the means of increasing the aggregate volume that we know relatively little as to the desirable distribution balance between the high and the low income groups. But it is now generally agreed that if we begin to look upon our lowest third in the cities and on farms as our new markets, as we create more national income, we can do a better job than in the past in seeing to it that the gap between the lower and the upper income groups is narrowed to the general interest of all groups.

Dilemma

Here is a dilemma. Scientific advances in agriculture constantly release labor at a time when employment opportunities are no longer open in urban industry. In fact, industry has an unemployment problem of its own; and the service and professional occupations are limited by the inadequate purchasing power of consumers of these services.

—Technology on the Farm

Land Clearing IN THE NORTHWEST

By WILLARD W. TROXELL *and* HARRY J. VOTH. *Removal of stumps from land to be cultivated is an interesting subject in the way that all frontier operations are intriguing, now that our frontier has vanished. But it is more—it involves the economics of costs and returns and is important in the reclamation of land.*

Before the white man came with his saw and ax, almost the entire area of Oregon and Washington west of the Cascade Mountains was covered by a dense forest of big trees. Douglas fir predominated, but there were also cedar, spruce, and other species.

The forest has been the base of the economy of this region, but to settlers following in the wake of logging operations it has not been an unmixed blessing. Measured by ordinary standards, the stumps are enormous. Diameters of 4 to 5 feet are common, and occasional stumps 8 feet or larger are encountered.

It takes little imagination to picture the back-breaking labor required to clear a few acres of this cut-over land without the aid of machinery.

Blasting, stump-pullers, donkey engines, and special methods of burning have reduced the labor and cost of preparing the land for agriculture, but until recently it remained an expensive, laborious undertaking.

About 10 years ago the bulldozer was developed for trail and road building. A bulldozer is a steel blade 7 to 10 feet long, mounted in front of a tractor in such a way that it can be raised or lowered by the operator. It is an efficient instrument for shallow digging in loose soil, leveling ground, and similar operations. This device came into use for land clearing about 2 or 3 years ago, and has effected an astonishing reduction in the cost.

The tractors used in this work are of the track type with Diesel or "controlled ignition" oil engines. In size they vary from a 36-horsepower machine weighing about 11,200 pounds to 96 horsepower, weight 33,600 pounds. The cost of the tractor and bulldozer ranges from about $5,500 to about $12,000, depending on size and accessories.

The bulldozers are of varying design. The ordinary type of curved blade, designed for moving earth, is sometimes used. Special land-clearing blades are equipped with heavy teeth that extend about 18 inches below the blade. These teeth are in some cases removable and adjustable for depth. Some bulldozers have a wedge mounted at one side and extending forward beyond the blade for splitting stumps.

The usual procedure is first to blast the large stumps, using just enough powder to crack them and loosen the roots without throwing the stumps out of the ground. Many old stumps are rotten enough so that no "shooting" is required. Old cedar stumps are usually hollow and do not need to be cracked. Smaller stumps, say 24 inches or less, if not green, can readily be removed by a large bulldozer without cracking.

Machines and Methods

After a stump has been cracked, the bulldozer pries the pieces loose, digs around it where necessary to cut off and remove lateral roots, then pushes the pieces of stump out of the ground. The machine shoves the fragments of stump, roots, and other debris into a pile or windrow in a part of the field previously cleared, backfills the hole, and is then ready for the next stump. After the stumps have been removed, the land can be smoothed by the machine, if desired.

If care is not exercised to locate and remove all roots above plow depth, the farmer will encounter them in his plowing and will have to take them out himself. A considerable amount of hand labor is required in picking up small pieces of wood and roots and placing them in piles. This work is best performed by two or three men while the machine is at work, thus preventing the small pieces from being buried by the tractor.

The final operation is burning the debris and smoothing the ground that has been occupied by the piles. This is usually done by the farmer at his convenience after the machine work is finished. The windrows or piles do not cover much ground, so it is possible to grow a crop on two-thirds or more of the field while waiting for a favorable time to burn the debris. If the bulldozer is available after the first firing it can be used to bunch the unburned material, or this may be done by the farmer himself with the aid of a team or tractor.

Where the land is covered with brush or second-growth trees, it is the practice in some areas for the farmer himself to slash and remove the trees and brush, leaving only the stumps to be taken care of by the machine. It is probable, however, that this preliminary surface clearing could not be justified by the saving in machine time unless a very low value is placed on the farmer's labor. The bulldozer can readily clear up brush and small trees as part of the stump removal operation and do it more cheaply than it can be done by hired labor.

While the bulldozer has established itself as the best type of equipment for land clearing, it is still in the stage of development and controversy with respect to details. Argument rages as to the best size of tractor, the hydraulic versus the cable lift, and the merits and demerits of teeth and splitting wedges. But new ideas are being tried constantly, and if successful, are widely adopted.

Contracts Are of Three Kinds

Since the equipment is much too costly for farmers to own, practically all of the machine work is being done by contractors, or by cooperative associations such as the Agnew Land Clearing Service of Clallam County, Wash., which was sponsored and financed by the Farm Security Administration, and the Skamania County Land Clearing Association. Many of the contractors have been road builders or loggers who have started in the land clearing business as a means of keeping their equipment working in slack times, and some have gone into it as a full-time business.

The contracts are of three kinds, lump sum, a stipulated amount per acre, or an hourly charge for the machine and operator. Lump sum or per acre contracts may cover machine work only, machine work plus shooting, or a complete job, including burning. Hourly rate contracts cover only the machine work, usually including the wages of the operator and sometimes a foreman who acts also as powderman.

Under the usual hourly rate contract, the owner is responsible for the shooting, burning, and miscellaneous labor. Hourly rates range from $3.50 an hour charged by the Clallam County cooperative for a 45 horsepower tractor, up to $7 or $8 an hour charged by others for more powerful machines.

These rates include the driver's wages.

Like all contracting businesses where costs are largely determined by underground conditions that cannot be fully appraised beforehand, land clearing contains a considerable element of gambling.

Lump-sum and per acre contracts place all of the risk on the contractor, who naturally tries to get the price high enough to cover all hazards. With the hourly charge, the risk is divided; uncertainty as to the time required falls on the landowner, and the risk of breakdown and other machine hazards are borne by the contractor. Hourly rate contracts are more flexible and more equitable than other forms, but many farmers hesitate to go into a clearing venture without knowing in advance exactly what the total cost will be.

Costs—$12 to $105 an Acre

The cost of clearing depends on the resultant effect of many variable factors acting in combination. The machine time and the amount of explosive required depend on the number, species, size, and condition of the stumps; the amount of second growth timber and brush; the amount of down timber; the kind and condition of the soil; the equipment used; the skill of the driver; and the judgment and skill of the powderman.

The contractor must set his price high enough to cover the cost of moving the machine, a highly variable item that depends on the weight of the equipment and distances to be moved, as well as compensation for his own time and effort and other overhead costs.

Costs of clearing under fairly typical conditions in the Douglas fir region are illustrated by data collected in the summer of 1939 from 43 clearing contracts, aggregating about 550 acres, on farms in Skamania, Lewis, Thurston, Pierce, and King Counties in Washington. The costs varied from $12 an acre for fairly open ground with very few scattered large stumps and sparse cover of small trees or brush to $105 an acre for land thickly covered with stumps, including many large ones.

These are costs to the landowner, and include explosives, blasting labor, bulldozer work and a small amount of hired labor for picking up; cost of burning the piles of debris is not included. On two-thirds of the jobs the costs ranged from $30 to $75 per acre. Eighteen jobs, or 42 percent of the total, were in the range from $35 to $60. Contracts exceeding $100 per acre are rarely encountered. There is possibly a considerable amount of land in the Northwest which would cost more than $100 to clear by the bulldozer method, but owners of such land are seldom willing to pay for it. Clearing similar to the $105 an acre contract is reported to have cost $200 to $250 or more by older methods.

In areas where big trees are not so common as in western Washington, clearing costs are correspondingly lower. Some available information indicates that cash costs, covering machine time, operator, and powder, may be as low as $15 an acre on fairly typical cut-over land in northern Idaho.

Clearing Land for Settlers

With the heavy influx of farmers from the Great Plains following the droughts of 1934 and 1936, the relative scarcity of suitable farm units in the Northwest became apparent. Many newcomers bought cut-over land and have started clearing by hand-labor methods, supplemented by animal power and blasting, but usually only a very few arable acres are added by all the time the farmer can spare for this work in a year. The bulldozer can greatly speed up this slow, laborious process and release the farmer's labor power for more remunerative enterprises.

There are thousands of acres of cut-over land in the Northwest which would be suitable for cultivation if cleared. Not all of it, however, would be productive enough to justify the cost.

Both earning power of the land and clearing costs vary widely, so that only by balancing capitalized earning power, or value, against estimated clearing costs plus purchase price can any proposed undertaking be justified. With clearing costs below $100 an acre, it is feasible to bring into cultivation a considerable acreage if the purchase price is reasonable. Clearing of much of the poorer land, or land on which clearing is unusually difficult, would not be justified even if the land could be acquired for nothing.

Before any clearing project is inaugurated, a careful determination of economic feasibility should be made for the specific tracts under consideration.

When allowance is made for all the costs involved, including a reasonable compensation for the farmer's own labor, the bulldozer method is in most cases much cheaper than others, is far more rapid, and is adapted to use under all conditions save only where the ground is too soft to support the machine.

But this method has the disadvantage that it requires an immediate cash outlay of considerable amount. Burning stumps in place by blower or charpitting requires little or no cash, but takes a great deal of patience, skill, and labor. A farmer can utilize spare time in this fashion and thus clear additional land at little or no cash cost, but, even so, many are unwilling to put in so much labor for so small a return.

Costs of Using Bulldozers

The use of bulldozers is preferred by those who can raise the money. A settler must have at the start sufficient cleared acreage to provide a livelihood, or his family must be supported out of savings or from other sources until the farm yields the necessary income. Rapid clearing by machine of at least enough acres to produce the family's minimum requirements is the plan that appears best in developing new farms.

The farmer's cash outlay can be kept to a minimum and his labor utilized efficiently if he will do the blasting, picking up, and burning, himself. If he does his own blasting it should be under the advice of someone who is experienced in the work, in order that neither powder nor machine time will be wasted. If extra help is required at any stage of the operation, an arrangement to exchange labor with neighbors will do away with the necessity for hiring any men. This leaves only the explosive and the machine work to be paid for.

Keeping the cost of the machine work down is a problem in organization and management. If the acreage to be cleared is large enough, it may pay the owner or agency carrying out the project to buy the machinery. Most clearing will average probably 4 to 8 hours of machine time to the acre.

Forming Cooperative Groups

In a probable working life of 10,000 hours, one machine could clear a total area of the order of 1,200 to 2,500 acres over a period of about 3 to 5 years. Selection of the proper equipment and the hiring of a qualified man to operate it are obviously important. Moving costs can be minimized by scheduling the work so that moves by truck will be infrequent. Operations even as small as 20 to 25 acres between truck moves will keep the cost of moving the usual type of equipment down to $2 to $3 an acre at most.

Where there are no private contractors in the business or where contract charges are excessive, the formation of cooperative associations may be advisable.

The Agnew Land Clearing Service in Clallam County is an example. This organization was sponsored by the Farm Security Administration, which advanced $6,000 for purchase of the equipment. Five local farmers, known as the "master borrowers," signed personal notes to obtain the loan. These master borrowers receive a small amount of free bulldozer work as compensation for their risk. One of these men acts as manager and receives 50 cents an hour for the time he puts in and 5 cents a mile for the running expenses of his automobile. Before the money is lent, the members of the association must sign in advance for 5,000 hours of operation.

Cooperatives can effect savings through adding together many small jobs to form a project of sufficient size to gain the benefits of scheduling the work to reduce moving costs and idle time to a minimum. Overhead charges are not avoided, however.

Three Results From Land Clearing

Efficient management is a basic requirement. The actual work of organizing the cooperative and persuading the farmers to join has to be contributed free by someone. It is not necessary in all cases for a cooperative to buy the machinery. The organization could make a contract on an hourly rental basis with someone who owns a machine. If the organization can guarantee the owner several months' or a year's steady work, a low rate could probably be agreed on, since there would be no selling expense and the risk of idle time would be reduced. Where there are a number of competent land-clearing contractors competing for business the formation of a cooperative to purchase and operate a bulldozer would probably be inadvisable.

It is reported that in the Northwest many thousands of acres of State- and county-owned land and tax-delinquent land would be suitable for cultivation if cleared, and it has often been proposed that this land be cleared and sold to settlers. The use of relief labor in the work has been advocated.

Offhand, this seems to be a sound idea and would accomplish three results: It would provide opportunity for more people to earn a living from farming, it would increase the tax base and economic activity of the counties and State, and it would provide useful work for relief clients. Surveys would be required for selection of the land and determination of the best way to organize and finance these projects.

Moderation

The authority of the prince must be defended by a military force; that force can only be maintained by taxes; all taxes must, at least, fall upon agriculture; and agriculture can never flourish except under the protection of justice and moderation.

—Artaxerxes, king of the Persians

But, in order to keep the settlers' financial burden and the subsidy, if any contributed by the public, to a minimum, the cheapest known method of clearing should be used.

In nearly all cases this means machine work, which involves relatively little unskilled labor and hence is not suitable for relief projects that require a high ratio of labor to total cost. Land clearing is, however, suitable for public works projects if there are no restrictions as to the proportion of the money that must go directly to labor. As much as possible of the unskilled labor should be done by the settlers themselves. When the clearing must be done before the settler moves in, the stump fragments, logs, and other debris can be left in piles or windrows to be burned after the new owner takes possession.

War, Food,
FARMING, AND PRICES

By O. C. STINE. *In this continuation of his article, 1917–1918: Lessons for a Later Day, in* LAND POLICY REVIEW *for November, Dr. Stine summarizes the role of American agriculture during the world war, and says: "Looking back, it seems obvious that the activities of the Food Administration and of the Department of Agriculture should have been more closely coordinated."*

PERHAPS THE BEST way to discuss the role of American agriculture in 1917–18 is from the standpoint of the major food problems that faced the United States Food Administration. The work of the Department of Agriculture and of other agencies was important, but it consisted mainly in a speeding up of ordinary peacetime activities. It was a change in degree, not in kind. The Food Administration, on the other hand, was concerned exclusively with wartime food problems.

No problem was more acute than the shortage of wheat. As the Allies' own production diminished, their demands for foreign wheat constantly increased.

Furthermore, because of the reduction of British tonnage through submarine warfare, it was doubtful if Australia and Argentina could ship their quotas to the Allies.

Such a demand upon our wheat fields brought with it a rise in wheat prices. No. 1 Northern Spring wheat went to $3.15 a bushel on May 11, 1917, an all-time high. The Chicago Board of Trade, compelled at this point to forbid trading in wheat futures, ordered a settlement of all outstanding contracts.

It might be assumed that, with wheat averaging nearly $3, no further inducement would have been necessary to stimulate farmers to increase their acreage. But the fact of the matter was that few farmers had received anything like such prices. Most of the 1916 crop had been disposed of at prices below $1.50 a bushel. Farm prices reached $2.49 in June but the new 1917 crop began to move to market in July with farm prices averaging about $2.20.

Only the President could set prices. To this end he appointed a committee of men of widely differing interests. They met in Washington August 20, 1917.

It is unnecessary to go into all the arguments for either a higher or lower price, according to the point of view involved. It is enough to note that with labor interests asking $1.84, and the farmers $2.50, they compromised on $2.20.

A difference in viewpoint between Congress and the Food Administration was noticeable. Congress provided a minimum for the 1918 crop; the Administration defined a "fair price" for the 1917 crop. The former was not to be effective for nearly a year; the latter was effective from its announcement. In effect, Congress acted to protect the producer, while the Administration had in mind both the producer and consumer.

Working of the License System

The license system already referred to was put into effect, but a licensee could purchase wheat at prices higher than those fixed by the Government. Many of them did. In this, the licensee was doing nothing legally wrong—merely exhibiting an unwillingness to cooperate with the Government. With this loophole in the system, it was deemed necessary to establish some other control, and the United States Grain Corporation was set up for this purpose. It began active operations September 4, 1917. Its two chief functions were to purchase wheat for the United States and to control the license system.

The Corporation established buying agencies at all important markets and stood ready to purchase all wheat offered at the established price, thus maintaining a minimum price throughout the period of its active existence, from September 4, 1917, to May 31, 1920. In effect it fixed the price at this time during the period September 1917 to June 1918 and on a slightly higher level from that point until after the armistice.

Throughout the War, the Grain Corporation also undertook to see that an equitable distribution of wheat supplies was made to American mills, and to control the prices at which flour and other products were sold by the mills and to the consumer. The Corporation was also charged with the control of all cereal supplies for export.

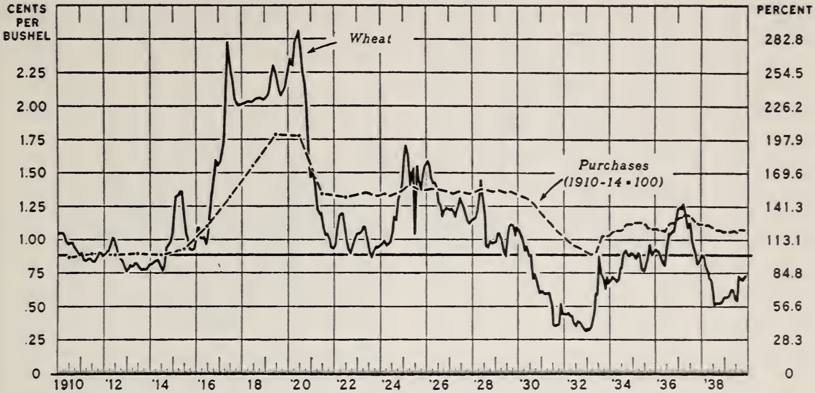
Another serious problem had to do with sugar. The drain upon Cuban and American stocks was reflected in its market price, and by August 1917 raw sugar prices had reached a point 11 percent higher than the average for the year preceding the outbreak of the world war. To check this rise, virtually the entire sugar industry was brought under the license system of the Food Administration by October 1, 1917. This licensing control limited the profits of the wholesaler and jobber to the pre-war normal, which averaged about 25 cents a hundredweight.

Problems of Sugar Prices and Production

With the 1917–18 crop under control, it was necessary to take care of the next year's crop. It was estimated that this would come to 1,600,000 tons, and our requirement was 4,000,000 tons. The balance would have to be imported, with Cuba the logical provider.

But the wholesale price of sugar in the United States has been established at 9 cents after an investigation had disclosed that any smaller price would not allow the Louisiana cane producers and the western beet raisers a fair return, while Cuba sugar could be produced at 7½ cents and still leave a good profit. This disparity created problems so serious that it was decided some governmental form of equali-

FARM PRICE OF WHEAT AND INDEX NUMBERS OF PRICES PAID BY FARMERS, 1910-39



zation would have to be put in practice. Accordingly, the United States Sugar Equalization Board was set up with a capital stock of $5,000,000, subscribed by the Food Administration.

The Board entered into an agreement with the domestic producers to purchase all their beets and cane. It agreed also to purchase Cuba's entire sugar output. The Allied governments designated this Board to make purchases of them; the Board then made agreements with the refiners to obtain their supplies at 7.28 cents a pound. The refiners in turn agreed not to charge more than 1.54 cents a pound as a refining margin. The Board turned into the United States Treasury the profit it made on the price paid Cuban producers.

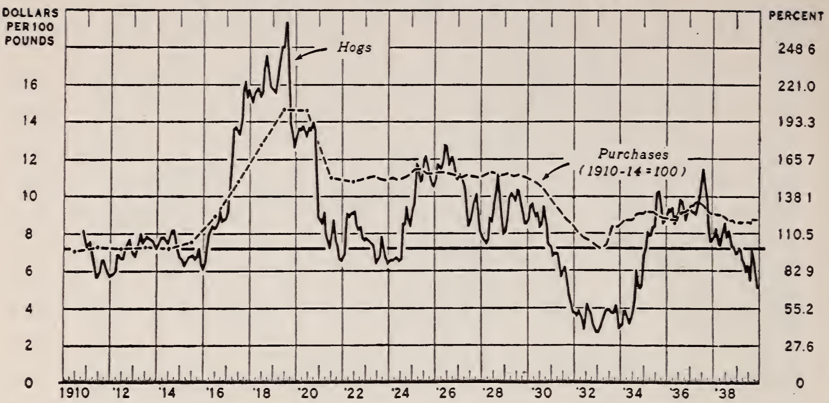
To round out the program, it was decided also to limit consumption. Supplies to confectioners and manufacturers of nonessential foodstuffs were severely limited. Public consumption was closely regulated. The amount a retailer could sell to a customer dropped to 2 pounds a month at one period.

The third major food problem was in regard to livestock and meat. The devastation of a large part of the European livestock area, the shortage of fodder, and the resulting increase in the annual slaughter combined to create a serious world shortage of meats and fats, despite a slight increase in American production. It was apparent that the large Allied demands would in time absorb our domestic supplies, but it was necessary that future shipments to the Allies must equal, if not exceed, those of 1916–17. Two methods, accordingly, were adopted to solve the meat problem — conservation through decreased consumption and stimulated production.

The main instrument of price control over beef and pork was the regulation of markets through purchases by the Food Administration, but to this was added a regulation of profits and a general supervision over the activities of the packing industry through the licensing system.

Probably in no other part of its work did the Food Administration have as much difficulty—and receive

FARM PRICE OF HOGS AND INDEX NUMBERS OF PRICES PAID BY FARMERS, 1910 TO DATE



as much criticism—as here, although it was highly successful in its efforts to enlarge shipments of pork to the Allies. Many big packers resented governmental control; yet, on the other hand, they were charged by many with making exorbitant war-time profits. The Federal Trade Commission asserted, in fact: "Packers' profits in 1917 were more than four times as great as in the average year before the European war, although their sales in dollars and cents at even the inflated prices of last year had barely doubled."

The crux of the whole matter lay in hogs. The world was consuming its supply of fats much faster than it was producing them, and the production of hogs in large quantities was the quickest means of producing fats. On the grounds that market conditions were unstable, however, and that hog raising involved too much risk and not enough profit, many farmers raised other commodities.

A commission appointed by the Food Administration investigated the pork industry, and, pointing out that the average ratio of corn to hog production was about 12 bushels to 100 pounds, advocated one of at least 13 to 1 to restore hog production to a more stable basis.

The administration ran into difficulties in enforcing this ratio, however, and early in September 1918, announced that the 13-bushel ratio was based on prices of corn on the farm and not in Chicago, despite its announcement specifically stating Chicago prices. This meant a reduction to the farmer of about $2.50 a hundredweight. The Administration, explaining that its agreed price was too high for the export trade, then put the price at $15.50 a hundredweight, which meant in effect a ratio of only 10.8. This brought on a storm of indignation and complaint from the farmers.

Hog prices fluctuated as before. They reached $19.75 in September 1918, but (when reports of peace circulated in October) dropped to $16.75. The Allies' post-war demands stimulated the price for a time, but their large withdrawals from the market during the summer and fall of 1919 caused a spectacular drop in quotations.

The other food problems and controls can be treated briefly.

Problems of Profit Control In Other Foods

In regard to poultry and dairy products the Administration's problem was strictly one of profit control, and no definite price fixing was adopted. Licensing regulations and other efforts sought to prevent hoarding and intertrading, and to eliminate waste.

Cottonseed prices jumped to $56.51 a ton by August 1917, an increase of 150 percent above the pre-war level. The main product, oil, went up 125 percent in the same period. Accordingly by Presidential proclamation, all ginners, crushers, refiners, and dealers in cottonseed, cottonseed oil, meal, and cake were placed under license on November 1, 1917.

The canning industry was regulated with little delay, particularly because it was shown that profits of some concerns showed an average increase of 9 to 32 percent in a single year.

Many other foodstuffs were regulated by the Food Administration. The methods used were generally either one or more of the type used to control the foods already mentioned. Among the more important of the goods thus controlled were coarse grains and feedstuffs, coffee, ammonia, ice, arsenic, oleomargarine, rice, and rice flour.

Criticisms and Complaints

In 1920, in a privately printed report of the Food Administration, Mr. Hoover charged that the Allies, as soon as the war was won, flatly broke their agreements with us in connection with their food purchases here and seriously imperilled our entire economy. The Administration head wrote feelingly that we built up a huge food surplus—specifically in fat products—for the benefit of the Allies, that we sold this food to the Allies at a restricted price, and thus after the war the moment the world price on these products fell below the stipulated price they had agreed to pay us, they quit buying from us.

As though he might have intended going into it later, Mr. Hoover wrote:

"It is not the time to discuss the attitude of some of the Allies in refusing to cooperate in these matters and the consequent jeopardy into which our whole commercial structure was placed by the failure of some of them to maintain an obvious obligation."

During its entire career, the Administration was subjected to scathing criticism, particularly from the agricultural interests. General criticism included the charges that its purpose was poorly conceived, that it exempted producers and retailers, and that it made no provision for maximum and minimum prices other than for wheat.

Many grain dealers felt that they had not been fairly treated by the Administration, and that it owed them money as a result of their operations during the war and immediately afterward. Bills calling for this money have been introduced many times in Congress. Even today, one is pending.

Another complaint was that the

Administration had disbanded too quickly after the war, and had left the farmer adjusted in many ways to a war economy—that is, to surplus production and surplus acreage. Since there was no longer a Food Administration to turn to, it was charged, the farmer was left to find his own solution to a problem which he had not been alone in bringing about.

The price of some farm products advanced after the abandonment of control, and continued on a high level through another year. In 1920 prices started to decline. Taking the average farm price of wheat to illustrate price movements associated with the war, the record reads: June 1916, $1 a bushel; June 1917, $2.48; November 1917, when price fixing set it back, an average of $2. It remained within 10 cents of this level, averaging $2.06 a year later, when the war ended.

Within a few months after the war, prices began to advance and reached the high average level of $2.58 a bushel in June 1920, from which—within 2 years after the Armistice—a declining market dropped the average farm price back to below the dollar level.

From this record it seems apparent that the price of wheat was held during the period of the war at a level somewhat below what it would have been on a free market.

Although the price of wheat was set below the current market, winter wheat seedings increased from approximately 38,000,000 acres in the fall of 1916 to 51,000,000 in the fall of 1918; and the acreage of spring wheat harvested increased from 19,000,000 in 1916 to 24,000,000 in 1918.

These increases were doubtless stimulated to some extent by the activities of the Department of Agriculture to induce farmers to grow more wheat. Judging from farmers' response in production, the fixed prices may have been high enough to contribute to an expansion of acreage.

The record of another controversial issue—hogs—reads as follows: The farm price averaged $8.21 a hundredweight in June 1916, and $13.50 in June 1917; the advance continued to $16.15 in October and remained within one dollar of this level until after the Armistice.

Advances in 1919 carried the average price to $19.30 in August of that year, from which the general decline carried prices back to below the $9 level by December 1920. Inspected slaughter declined from 40,000,000 head in the year ended June 30, 1917, to about 35,000,000 in the following 12 months, but increased to more than 44,000,000 in the 12 months, July 1918 to June 1919. From this, the reason for taking action to obtain more pork is obvious, and the prompt response undoubtedly was stimulated by the advance in prices.

It seems obvious that the activities of the Food Administration and of the Department of Agriculture should have been more closely coordinated. Readjustments in production and prices could not have been avoided. The Food Administration should have been extended through a period of at least 5 years following the War, or its functions should have been merged into those of the Department of Agriculture so that the Federal Government might have contributed toward a more orderly liquidation of the war boom.

Making the Most of WESTERN WILD LANDS

By MONT H. SAUNDERSON. *This article suggests several policy objectives for an area study of such "wild" land as national forests and grazing districts. Among the aims listed are maximum income to farm and ranch communities, distribution of uses, integration with the institutional framework of the communities, and cooperative management.*

THIS ARTICLE seeks to develop a point of view about ways and means for a well-rounded area study that can serve as a background for administering a body of western "wild" land, such as a national forest or a grazing district.

For brevity, let us use the illustration of a national forest that is valuable for summer grazing and that has a high degree of use association with adjacent privately owned spring and fall grazing lands and cultivated feeds. Such a situation prevails on many western national forests.

This kind of national forest will be somewhat heterogenous as an "area," in that generally there are communities of different size and characteristics on the irrigable lands below the watersheds. These communities generally constitute a resource unit in that they each have a fairly well-defined physiographic division of the "wild" land. There may, however, be questions of choice in the use of the same public land resource by different communities, and this is the reason for considering the entire forest as an area.

The area study must recognize at the outset that national forest administration for some time has been working toward certain policy objectives. The first purpose of the study should be to measure the degree of accomplishment of these objectives. Other aims should be to appraise the policies themselves, in their relation to the resource situation, the economy, and the institutional background of the area, and to bring out the changes needed to make the desired administrative policies effective, and to develop the programs and procedures which will facilitate these changes.

Probably the most important of the policy objectives for which the study should undertake to measure degree of accomplishment is that of making the resource contribute, within the limits of resource maintenance, the maximum possible income to the farm and ranch communities. This is a production-economics concept that has essentially two phases, the economics of resource interdependency for determining the efficient use associations of different types of land, and the economics of enterprise for determining efficient sizes and types of farm and ranch operating units for range livestock production. These two phases may not be complementary.

A second policy objective is to distribute the use of the resource as widely as appears to be consistent with good resource management and the economic stability of the established ranch owners using the range.

A third is to integrate the use of the resource with the institutional framework of the communities. The distribution of the use of the resource and the prices charged for its use may have a considerable influence upon private land ownership, taxation, and capitalization, upon community settlement patterns and resulting public utility costs, and upon local governmental organization.

A fourth objective is the participation by groups of forest users in the working out of a management plan for the resource, and in the cooperative management of the resource.

A fifth objective—one that will become more important in the future—is the relation of the use of the public land resource to regional and national policies concerning commodity production supplies and supply costs, resource conservation, and choice among the different single or multiple alternatives of resource use.

For the fulfillment of the three primary purposes of the study, several kinds of information are needed. The general economic and institutional picture of the area should be developed. This will require "in place" mapping, and accompanying statistical summations, of the location of homes, schools, roads, community centers, land ownership and tax status, size, type, and income yield of all farm and ranch operating units, and other similar material. This information shows the community organization and type of agriculture of the area, and is primarily in the nature of a background for the study.

Some type of resource inventory is essential, and should show, by localities, the grazing capacity of the different ranges, the carrying capacity of the cultivated feeds, and the acreage and yield of cash crops. Seasonal use and class of livestock for which the ranges available are best suited should also be shown as well as other features connected with the usability of the range.

The present use of resources should be shown—the numbers and class of livestock and season of use of the different seasonal ranges, livestock trail movements, and the use of cultivated feeds for livestock maintenance.

Comparison and Analysis of Material

Information regarding the present distribution of use of the forest range should show by communities the extent of the use of the summer range by the holders of the other complementary seasonal ranges (that is, stock ranges), and the distribution of summer range to different size classes of livestock operations, such as small, medium, and

> *The agricultural population produces the bravest men, the most valiant soldiers and a class of citizens the least given of all to evil designs.*
>
> —CATO

large farm livestock enterprises; and small, medium, and large stock ranches.

There is need for a well-selected sample of farm and ranch organization and operating data (including farms that do not operate a livestock enterprise, and including ranch operations and farm livestock enterprises that do not use the public lands).

Certain of the information relating to the institutional factors should be localized to the different communities, particularly the data concerning tax loads and public service costs, land tenure, and land capitalization.

Let us consider briefly some of the methods of comparison and analysis of this material.

The resource inventories and the present use data, for example, may point to lack of balance between seasonal range and feed capacities, and between these capacities and their present intensity of use and season of use, and may indicate the alternatives for economic change.

A study of the sample data showing the organization of the different types of farm and ranch operation also may point to certain changes in the distribution of the use of summer range among these different types. The choice in this case may be between the ranch operations that make efficient use of the complementary seasonal ranges, and the farm livestock enterprises that improve the organization of the diversified farms.

On the other hand, the small livestock permits may not involve a question of working out the comparative operating efficiencies of different types of commercial livestock production, but rather a matter of adding some income to the subsistence or quasi-subsistence units. A study of this type of operation may show other and more effective ways of getting this supplemental income.

A comparison of the institutional picture of the area with the present areal distribution of the public land grazing privileges may indicate instances where isolated settlement may eventually be reduced, land costs and capitalization equalized, and public service costs lessened.

The community picture of resources and of farm and ranch organization may point the way for more effective local cooperation in planning for and carrying out the management of the resource.

There are certain other aspects of the area study which have not been developed in this brief presentation. One of these is that a national forest or a grazing district which has high values for grazing may also have high values for other uses which may compete in some degree with grazing, and these other uses, such as water production, wildlife, or recreation, may not be closely associated with the income of the local communities. In this situation, the combination of uses which will result in highest values cannot be determined entirely by local income considerations.

Rural Land Holdings
IN SOUTH CAROLINA

By G. H. AULL. *We pay a great deal of attention to problems of agricultural adjustment, soil conservation, rural rehabilitation, farm credit, and, in general, to the whole field of land use planning. The solution of these problems must consider all groups, but the immediate approach to them is necessarily through the present owners. Certainly, under a system of private property in land, the owners' rights, although by no means absolute, are exclusive.*

The ownership, size, and value of separate land holdings are significant factors to be reckoned with in the initiation and development of land use programs. Unfortunately, however, very little information of this kind is available, even in United States Census reports.

For example, the number of farms in South Carolina on January 1, 1935, was reported by the census to be 165,504.

According to the census, however, a "farm" includes "all that land which is directly farmed by one person, either by his own labor alone or with the assistance of members of his household or hired employees. The land operated by a partnership is likewise considered a farm * * * when a landlord has one or more tenants, renters, croppers, or managers the land operated by each is considered a farm. Thus on a plantation the land operated by each cropper or tenant was reported as a separate farm."

This definition provides no answer to questions about the ownership of these "farms" or the size and estimated value of the separate land holdings. For example, the 1935 census enumerated 51,327 "full-owners" and 10,615 "part-owners" but it did not reveal the ownership of approximately 100,000 "farms" operated by tenants, about one-half of whom were croppers.

This information, nevertheless, is important for purposes of land use planning and agricultural adjustment.

It is interesting to note that 62.2 percent of the "farmers" in South Carolina who were tenants in 1935 operated only 47.8 percent of the land in farms (and 44.9 percent of the values inherent in farm real estate) but harvested 56.0 percent of the crop land. Owners, on the other hand, with 37.4 percent of the farms, operated 47.6 percent of the land in farms (and controlled

50.6 percent of the farm real estate value) but harvested only 41.9 percent of the crop land.

The average "cropper" farm contained less than 43 acres and had an estimated total value (land, buildings, and improvements) of only about $1,000. Full-owner farms, on the other hand, were almost 100 acres in size and had an estimated value which averaged nearly two and one-half times that reported for cropper farms.

A study was undertaken by the South Carolina Experiment Station (in cooperation with the Work Progress Administration as project No. 3687) to determine the facts about the ownership of rural land holdings in South Carolina as to type of owner, size of separate holdings, and assessed value distribution. The data, analyzed by counties and by type-of-farming areas, are suggestive of problems which will be encountered and conditions which must be faced in the different sections of the State if a sound land policy is to be put into effect.

How Data Were Obtained

Data were obtained direct from the tax rolls in each of 43 of the 46 counties of the State. Properties within the limits of incorporated places were not considered. As a source of data the tax books were used rather than any "register of deeds" because of the fact that they afforded a more complete and convenient record.

Not all of the properties included in the study are in any sense farms. Areas of less than 3 acres were excluded, however, which had the effect of eliminating many nonfarm rural enterprises. In addition, a conscious effort was made to omit from consideration properties which obviously were industrial in nature.

It is unfortunate that there is nowhere available an adequate, current index of the total land resources of the State according to any acceptable classification. The Agricultural Adjustment Administration records are perhaps the most complete with respect to land in farms, but do not cover extended areas in forests.

The periodic returns of real estate for taxation easily could be made to serve this purpose. Certainly a reasonably complete classification of land is essential to a sound land policy and would be of particular value at the present stage of development. The usual tax return, however, shows merely the total number of acres and their value without regard to use, productivity, or other characteristic. No distinction is made between farm land and forest land or between crop land and woodland or pasture. In many cases, even, it is optional with the taxpayer whether a distinction is made between "acres" and "lots."

Types of Ownership

In the 43 counties, 141,355 rural properties were listed and classified, first, by type of owner. Of this number 135,541, or 95.9 percent, were reported to have been held by individuals. Banks, insurance companies, other corporations and partnerships claimed title (on the tax books, at least) to fewer than 6,000, or only about 4 percent of all rural properties in the State. Owners other than individuals, however, accounted for 12.3 percent of the total acreage and 11.3 percent of the total assessed value of all rural properties listed.

The percentage of properties reported in the names of individuals varied by type-of-farming areas from 94.6 to 97.9. In one area, however, individuals accounted for only about two-thirds of the acreage (and two-thirds of the assessed value) and in only three areas did individual ownership embrace more than 90 percent of the acreage. These figures are exclusive of land held by governmental agencies.

Corporate ownership was negligible in a few counties but in others amounted to one-half of the acreage and nearly one-half of the assessed value of all rural estate. Since corporate holdings are larger than average, the number of properties involved is proportionately much less than these figures of acreage and value would indicate, and range from 1 percent in some counties to 23 percent in others.

Ownership by Corporations

Corporations (including banks, insurance companies, lumber companies, and so on) seem to have acquired substantial acreages in Jasper, McCormick, Clarendon, and Harry Counties, although the number of such holdings is relatively small. In Jasper County, for example, fewer than 4 percent of all rural properties are listed under corporate ownership, but they embrace nearly 60 percent of the rural lands in the county and 58 percent of the rural assessed values.

To put it differently, the average individually owned rural property in Jasper County is 88 acres and is assessed for $419, or $4.76 an acre. The average of all other holdings, however, is 3,418 acres with an assessed value of $14,968 per holding and $4.38 an acre. In the State as a whole the differences were less marked:

Type of owner	Average size (acres)	Averaged assessed value	
		Per property	Per acre
Individuals	102. 0	$573	$5. 62
Banks	153. 0	721	4. 71
Insurance Companies	258. 9	1, 471	5. 68
All others	456. 9	2, 327	5. 09
All types	111. 5	619	5. 55

Of the 141,355 properties listed, more than one-fourth were less than 25 acres in size and nearly one-half contained fewer than 50 acres. Only 4,009, or 2.84 percent, measured as much as 500 acres. These latter properties, however, accounted for 28.37 percent of the acreage and 20.43 percent of the assessed value of all properties, while those in the first two groups contained only 8.78 percent of the total acreage and 15.05 percent of the total assessed value.

Here is shown the distribution of properties by size, and, for each group, the percentage of total properties, acreage, and assessed value:

Acres per property	Percent of total		
	Properties	Acres	Assessed value
Less than 25	25. 87	2. 69	6. 58
25–49.99	19. 01	6. 09	8. 47
50–99.99	23. 91	14. 89	17. 43
100–199.99	18. 73	22. 72	23. 36
200–499.99	9. 64	25. 24	23. 73
500 and above	2. 84	28. 37	20. 43

Considerable variation is observed in the distribution of the different sizes of holdings among the various types of owners. For example, less than 3 percent of the properties held by insurance companies were smaller than 25 acres, representing a negligible amount of acreage and of assessed value. One-eighth of the insurance company properties, however, were in tracts of 500 acres or more and accounted for more than two-fifths of the acreage and nearly one-third of the assessed value of all such properties. More than three-fourths of the acreage classified under miscellaneous holdings was concentrated in tracts of 500 acres or more.

Assessments

In the State as a whole, and for all types of ownership, it appears that somewhat more than one-half of the rural acreage and nearly half of the rural real estate value in South Carolina is concentrated in the hands of approximately one-eighth of the rural owners in tracts of 200 acres or more. At the other end of the scale, one-fourth of the owners control less than 3 percent of the acreage and about 6 percent of the value. Whether this represents an undesirable situation (and in what direction) is not now a question. It does, however, suggest some of the problems to be encountered in any attempt to work out desirable land use adjustments.

When viewed by counties, it is found that small holdings are predominant in the coastal plain area (especially along the Atlantic Ocean), and to a less extent in the highly urbanized counties of Richland, Greenville, and Spartanburg. The larger holdings, on the other hand, are evident in scattered counties throughout the State.

The abnormally high assessments of the properties containing fewer than 2 acres (average 11.1) are doubtless due in large measure to the relative importance of buildings on such properties, but may be explained in part by the relatively large number of such properties on the outskirts of cities and towns.

Compared with an assessment of 13.43 an acre on these properties, the assessment on properties of 500 acres or more is only $4 and on all properties $5.55.

Taxes on 30 Percent of Value

The acre assessment on properties of 500 acres or more is significant. Undoubtedly much of the timber in South Carolina is held in tracts that fall within this group and the low average rate of assessment is indicative of the fact that, while no provision is made in the statutes for a classification of property for tax purposes, timber appears to enjoy a favorable position in this respect.

Research indicates that, on the average, rural real estate is assessed for taxes at approximately 25 to 30 percent of its actual value. An assessment of nearly $90,000,000 on the rural properties listed in the 43 counties covered by this study, therefore, suggests actual rural wealth (real estate only, exclusive of strictly industrial properties) amounting to about $350,000,000. Although numerous inequalities are known to exist as between one property and another, the distribution of rural properties in South Carolina, as revealed by this study, may be taken as approximating the distribution of wealth among the owners of rural real estate (not including holdings of 3 acres or less and not including industrial properties).

An analysis of the listings reveals the fact that nearly 55,000, or about 40 percent, of the properties appeared on the tax books at an assessed value less than $250. These properties accounted for only 9.30 percent of the total acreage and 7.83 percent of the total assessed value. On the other hand, 51.30 percent of the acreage and 54.36 percent of the assessed value was contained in only 14.70 percent of the properties which were assessed for $1,000 or more.

> *The well-being of a people is like a tree, agriculture is its root, manufacturing and commerce are its branches and its life; if the roots are injured the leaves fall, the branches break away, and the tree dies.*
>
> —A Chinese Philosopher

These figures are interesting from the standpoint of their relation to the property-tax situation in South Carolina. For example, the average rural tax rate for State, county, and school purposes is, perhaps, not more than 40 mills, which (under current assessment practices) is equivalent to less than 1 cent on each dollar of actual value. This means that taxes levied on nearly one-half of the real properties in South Carolina amount to less than $10 per property and in two-thirds of the cases the amount is less than $20 per property.

As is to be expected, individuals hold relatively fewer properties of large assessed value (and presumably large actual value) than other types of owners. Only about one-seventh of the individually owned properties were on the tax books for as much as $1,000, as compared with about one-fifth in the case of banks, one-half in the case of insurance companies, and one-third in the case of all others. At the same time proportionately a much higher percentage of properties held by individuals were in the lowest assessed value group (less than $250).

From the standpoint of acreage, the figures are even more striking. Less than half of the acreage held by individuals was in tracts assessed for $1,000 or more while three-fourths of the acreage of insurance companies and six-sevenths of the acreage reported by "all others" was so held.

The average assessed value of all properties, as has been said, was $619 per property and $5.55 per acre. It appears that properties having a low assessed value were not only small in size but assessed at a low per-acre figure. With each increase in assessed value per property there was an increase in both average size and average assessed value per acre.

◆

Here Still——

HERE STILL on quiet afternoons we know
The hard-won gift of peace. Across our land,
Gaily the silver-ribboned highways go
Seeking each town, each farm to link with strand
Of farther sunlit seas. From our high hills
Sweetly the lovely winds of Heaven blow,
Soothing the valley homes. For all our ills,
From our own soil the streams of healing flow.

HERE STILL is peace—here where the James hastens
Past ruined church at Jamestown to the sea,
Where Valley Forge, green in the sun, chastens
Thoughts of our beginnings. It cannot be
That on this soil made free, that on this land,
Shadows of alien force will ever stand.

—ESTHER MARIE COLVIN

Solving a Problem BEFORE IT STARTS

By B. M. GILE. *Notable progress has been made in classifying nonurban lands so that they contribute most to the general welfare and to the labor and capital applied to them. But it is only the beginning. Needed also are greater attention to the preparation of information about land classification and use in a form suitable for future utilization, and action to prevent waste of resources in connection with privately owned lands and lands coming under State control.*

To improve the real income of farmers in the lower quarter of the income scale and assure greater security and stability of tenure for all farmers, land classification must be made available to present and prospective users and to the general public.

This involves mapping, for which many State institutions are at present inadequately equipped. It is largely a question of organization and budgets, and therefore administrators must be convinced of the need. Official reports of desirable or undesirable use problems connected with specific lands available to a prospective tenant or purchaser are uncommon. The solution of land problems in specified areas frequently depends upon the adoption of regulations and controls by the ballot, and this constitutes a practical reason why the general public needs to be supplied with land-use information.

The principle that land is vested with public interest is now widely accepted and its application to lands coming into possession of the State should meet with little resistance, since property rights are vested in the State and most of the land is not occupied. The fact that the laws of many States do not provide for a use classification of State lands before sale indicates either that the majority of the people's chosen representatives do not understand that land has undesirable as well as desirable capabilities, or that the legislators believe there would be more resistance than support among the electorate for such an undertaking.

In most States, the methods of administration and the laws under which State land departments operate are still those that were developed during pioneer days, when the idea prevailed that the public interest would be served best by transferring all lands into private ownership as rapidly as possible.

With few exceptions, States dispose of their lands for farming without regard to the quality of the land or the extent of land required for a family-sized farm. The price is determined by the law, usually on the basis of the accumulated taxes and legal penalties, and this price frequently has no reasonable relation to the probable annual income from the products the land will produce. The present procedure often results in scattered settlement, an unjustified increase in public costs for roads and schools, waste of natural resources, poverty, and increased relief costs.

To Avoid Private Exploitation

Private exploitation is still possible. If one can find a tract which the State has owned long enough for it to produce a valuable crop of timber, he may, under the law in many States, buy the land at a price that has no relation to the immediate market value of the timber crop. After removing the crop, which has taken years to produce, the barren land frequently is permitted to revert again to the State for nonpayment of taxes. Taxation methods with respect to land suitable for growing timber are frequently such as to discourage the practice of sustained yield and annual income cuttings. This encourages a destructive harvest. The result too often is a waste of both human and land resources.

It is encouraging to know that some progress is being made in the administration of State lands. In 1939, the State Legislature of Arkansas adopted a State land policy and provided for a statesmanlike procedure in the administration and disposition of State-owned lands in Act No. 331, which became effective June 9. The State land commissioner is given new powers and responsibilities. He is empowered to have lands surveyed in case of doubtful location or faulty descriptions; to bring action to quiet title; to have lands classified as to whether they should be retained in public ownership, allocated for agricultural settlement or returned to private settlement through sale or donation. Under the old law homesteads were limited to 160 acres. Under the new law it is recognized that a small acreage of very productive land that is all tillable may support a family, whereas a section or more might be the unit required where livestock grazing and perpetual forestry would be the main sources of income.

Other important provisions of the law are: That deeds to land disposed of may be something less than a fee simple title to the extent necessary to protect the public welfare; that the land commissioner may prevent isolated settlement and encourage group settlement; and that the State may sell small tracts of land to adjoining owners provided the enlarged ownership is not more than a family-sized farm.

The Federal Government belatedly set a good example in the administration of public lands in the Taylor Act of 1934, which closed the Public Domain to further homesteading, pending classification as to best uses. This public act reversed a national policy followed for 150 years and gave public recognition to the fact that little good farm land now remains in the public domain, and that further homesteading should not be permitted except on tracts classified as suitable for homesteading.

Privately Owned Lands Not In Farms

Rural lands privately owned but not now in farms comprise a rather impressive area in many States. In Arkansas, Mississippi, Louisiana, Alabama, Georgia, North and South Carolina, and Florida, 47 percent of the total area is not in farms and much of this is rural land in private ownership. In Louisiana, about 60 percent of the area is not now in farms, and in one parish where 88 percent of the land is not in farms, a study showed that 71 percent of this land is owned by 18 corporations, whose central offices were outside the State.

As privately owned rural lands not in farms are potential farm and home sites, it seems reasonable to propose that their proper use be insured within reasonable limits through control and directional measures. The public has shown its willingness to tax itself to help farmers improve their economic condition, and it would seem a prudent public policy to prevent the establishment of additional farms under conditions that would indicate probable failure if they are under average management.

Zoning is one of the social tools useful in preventing the development of undesirable results. Many States need permissive legislation to give added legal status to county zoning ordinances dealing with the use of land in strictly rural areas. A better understanding of the place and objective of rural zoning may be necessary before permissive laws can be obtained, and it is also essential for the proper administration of zoning ordinances, if and when they may be enacted. Interest will be most easily developed around local situations where the value of zoning can be readily understood, and zoning ordinances will be passed with the least resistance in areas containing considerable land not in farms.

To Prevent Ill-Advised Farm Purchases

One of the important things that ought to be done in connection with land not now in farms is to prevent the ill-advised purchase of land for agricultural enterprises. Restricting the use of such areas through zoning would accomplish this end, but—judging from the period of years required to accomplish zoning in Wisconsin after education leading to this end first began—it may be several years before this useful social tool for better land use is in widespread operation. In California, real-estate license laws have been helpful, and should receive consideration. The laws there require that prospective purchasers be furnished with written information on the suitability of the land for the uses to which it is advertised as being adapted.

In order that the enforcement official of real-estate license laws in any State may protect its citizens from ill-advised purchases of farm land in other States, it is desirable that the citizens be able to obtain from officials in these other States reliable information regarding the land offered for sale. For this purpose, a use-capability classification of specific lands, made by unbiased agencies, is needed. In some sections that contain land suitable for farm enterprises, it is a common practice for the land to be sold in tracts that are too small to provide a reasonable income. Therefore the classification should be supplemented by advice as to the size of tract needed, or information that the prospective purchaser may use as a basis for arriving at an intelligent conclusion. Price classification for the use recommended should also be included.

Even without zoning or license laws, a knowledge of land-use capabilities by local persons and some official stamp of approval or disapproval of a specific area for settlement can do a great deal to give direction to land settlement. The work on land classification being done through county agricultural land-use planning committees may be expected to be valuable in reducing new settlement in undesirable places or on uneconomically sized units, if their conclusions with respect to land classes are made available to the public.

In an area where public education with respect to land use and the relation of human institutions affecting land use is relatively new, there are two special reasons why we should not neglect to obtain as quickly as practicable a good land policy with respect to State lands and private lands not in farms. The first is that the development of these lands in their proper uses would make a real contribution by precept and example to progress in solving the problems connected with land now in farms. The second is that the use of these lands for those things which promise to contribute to the private and social well-being of the people should furnish added sources of income to the farm population.

Books

Men on the Move. *Nels Anderson.* The University of Chicago Press, Chicago. 357 pages.

by WILLIAM T. HAM

FOR WRITING on the migrants of today, Mr. Anderson has one prime qualification: He is an expert on the migrants of yesterday.

In 1923 he wrote a book called "The Hobo," a venture into what the author then regarded as sociological journalism, but which turned out to be history. For no sooner was the book off the press than its subject, the hobo, began to disappear from the highways of America. He became one with "the pre-Hollywood cowboy and the lumberjacks of the Paul Bunyan legends." In writing of those men of the road, as Mr. Anderson now confesses, he overlooked the technological changes which not only took away hobos' jobs but soon filled the roads with their successors, the migrants of today, the subject of this latest work.

The modern migrant is unlike his counterpart of the early twenties. The hobo, whatever his vices, was usually a self-sustaining man, deterred from settling down chiefly by his "itching feet." He was an individualist, a world citizen, with a mild scorn for the "home guard" of the towns, and the tied-down farmers, the "scissor bills." For the tramp and the bum he had a vast contempt: "A hobo will work, a tramp won't, and a bum couldn't if he wanted to." He was frequently a proud and sometimes an arrogant fellow, displaying a spirit very different from the frustration and apathy which so often characterizes the wanderer of today. The hobo was the "last of the ballad makers," a singer of struggle, not of despair, as the I. W. W. Song Book bears witness. It is apparent that he appealed to Mr. Anderson in a way the modern migrant does not. Hence the color of the first two chapters of "Men on the Move," which are a sort of salute to the "bindle-stiff," old style, in contrast to the rest of the book about the "rubber-tramp," the new style migrant on tires. For the Oakies and Arkies, migrancy is not a life program. They travel, often with their families, in the hope of ceasing to travel.

"Men on the Move," as the author points out in his introduction, contains nothing that is new. It is a presentation of material drawn mainly from the publications in the National Research Project Series of the WPA, those of the Division of Social Research of the same agency, and other FERA and WPA surveys of transient workers. Mr. Anderson has been for some years director of the Labor Relations Section of WPA.

THE BOOK is divided into three parts. In Part I the old and the new forms of the problem of migrancy are contrasted there are chapters on the unattached migrant and the migrant family. Part II deals with the causes of migrancy, namely, exhaustion of natural resources, change of industry, and agricultural change. In the account of exploited timber resources, stranded coal towns in Oklahoma and Illinois, and silent textile mills at Amoskeag and Manchester, the student of rural affairs may find much that is suggestive. In the chapter on change in agriculture he will find little.

Part III takes up the question of what is to be done about the migrant. On the whole this section is curiously inconclusive, perhaps inevitably so. For in his introduction Mr. Anderson disclaims any intention of presenting a solution of the problem. Men on the move do not worry him, so long as they move to some purpose. Migrancy, in his view, is a normal means of balancing opportunity between areas. Absence of such movement might produce greater social strains than now arise from current efforts at relocation. Provide jobs for the unemployed of the nation, of whom the migrants are merely a mobile section, and migrancy will lose its pathological characteristics. The volume of movement is not likely soon to diminish. Meanwhile, do not try to push the migrants back on the land and do not leave them to the mercies of the present ill-organized casual-labor market.

WHATEVER MAY BE DONE to control and direct migration will have to be carried out, Mr. Anderson believes, under the leadership of the Federal Government. State programs are too limited, and local measures are designed rather to protect the residents than to help the migrants, for most of whom the WPA has been of little benefit. What is needed is an effective, Nation-wide placement service, providing Federal guidance for the movement of the essential seasonal labor supply, combined with a program of public employment. Relief must be administered so as to terminate migrancy, not perpetuate it. "In the long run it is more economical to give public work than public relief." And although Mr. Anderson offers no detailed program, he believes that "there is plenty of public work that needs to be done."

√ For your attention

BALLOT BEHAVIOR; A STUDY OF PRESIDENTIAL ELECTIONS. Louis H. Bean. Introduction by Charles E. Merriam. 102 pages. Washington, D. C. American Council on Public Affairs. 1940.

This study of presidential elections "deals with some of the results of a hobby started by an accidental adventure into political statistics in 1936." Since 1936 the author has roamed as a spare-time activity, statistically, over the country examining political records of States, counties, and cities.

Some of the findings here recorded are: "A new and useful meaning to the old adage 'as Maine goes so goes the Nation'; the discovery of a large number of States that go as the Nation goes; a compact portrayal of 40 years of presidential history for each of the 48 States; a simple method of measuring political tides; the effect of business conditions on the course of these tides; and a schedule of relationship between the national popular vote and the State electoral votes . . ."

In his introduction, Dr. Merriam says in part:

"The present volume . . . is an important venture in the analysis of voting trends, and is worthy of the attention of all students of American political behavior. Without agreeing to all of Mr. Bean's methods and results, on some of which I have reservations, I commend his study to the careful consideration of specialists concerned with the more intimate and precise analysis of political phenomena. It will also be helpful to the great body of our citizens who wish a better background for examining the large number of analyses and forecasts of political observers now appearing and likely to appear in greater numbers in the immediate future. Reading this work of Mr. Bean will not automatically make a man a forecaster, but it will give him a far better background for checking up on the ways and means of the political soothsayers, whether proceeding on the basis of hunches or of technical analysis, whether driven along by wishful thinking or by scientific objectivity."

A SOMEWHERE ELSE. 13 pages. Oklahoma. Division of Water Resources. 1940.

This is a discussion of the Oklahoma migrant who is a victim of economic upheaval and of a proposed plan for his rehabilitation as an "antidote for 'forced wanderlust.' " The intensive orderly culture of soil, and the conservation of moisture are recommended. Intensive, diversified subsistence farming under small acreage individual allotment would be stressed under this plan. These subsistence units would be filtered throughout flood plains and adjacent areas. It is believed that with the development of soil and water resources, industrial enterprise would necessarily increase and that coordinated planning would undoubtedly group these "livelihood farms" and new industries to mutual advantage in market-labor relations.

AGRICULTURAL LABOR RESEARCH. Proceedings of the Conference on Research Relating to Labor in Agriculture. Berkely, California. William S. Hopkins, Stanford University, Social Science Research Council, Pacific Coast Regional Committee, Subcommittee on Labor in Agriculture, 1940.

This conference, which was designed to afford an over-all view of the farm labor situation before regional studies were undertaken in the Pacific Coast States, discussed research needs in the field of agricultural labor under these headings: Types of Agricultural Labor; Changes in Farm Structure Which Affect Agricultural Labor, Migration of Agricultural Labor; The Law With Respect to Agricultural Labor; Welfare and Farm Labor; and the Formulation of Research Programs. A list of those attending the conference is included.

MARYLAND FARM HANDBOOK, 1940. State and Federal Agricultural Services. United States Department of Agriculture. 59 pages. Washington, United States Government Printing Office.

The agricultural services listed in this farm handbook include agricultural services of the State of Maryland and the United States Government which are directly available to farmers. Topics on which information and aid may be obtained include: Agricultural Conservation Program; Agricultural Education; Crop and Livestock Estimates; Crop Insurance; Debt Adjustment; Farm Accounts, Farm Crops; Land Use Planning; Marketing; Rural Electrification; Soils; etc.

FAMILY INCOME AND EXPENDITURES. Middle Atlantic and North Central Region and New England Region. Family Income. Day Monroe, Elizabeth Phelps, and Idella G. Swisher. U. S. Dept. Agr. Misc. Pub. 370, 447 pp. Washington, 1940. (Consumer Purchases Study. Urban and Village Series.)

This report is one of a series covering income and expenditures of small-city and village families. Others of the series which have been issued to date are Miscellaneous Publication 339 of the United States Department of Agriculture, family income of the Pacific Region, and Miscellaneous Publication 345, covering such income in the Plains and Mountain Region. A similar series deals with income and expenditures of farm families. Of this series only one, Miscellaneous Publication 356, covering family income of the Pacific and Plains and Mountain Regions, has appeared. Further reports of both series are now in press or in process of completion. Part 2 of each series wil be issued in the form of a summary of family expenditures covering five regions.

A number of reports covering family income and expenditures in urban regions have been issued by the Bureau of Labor Statistics of the United States Department of Labor, in its Bulletin series. These, together with the reports mentioned above, constitute the Study of Consumer Purchases.

These studies were conducted by the Bureau of Home Economics of the United States Department of Agriculture and the Bureau of Labor Statistics of the United States Department of Labor, with the cooperation of the National Resources Committee, the Works Progress Administration, and the Central Statistical Board.

Such studies as had previously been made of family expenditures in this country covered only small samples of families or were restricted to certain groups of the population. This completed Consumer Purchases Study will therefore fill a long-felt need for information in this field.

In compiling the reports, the sample was limited to native-born, white, unbroken families, except in the Southeast and in New York City and Columbus, Ohio, where a special study of Negro families was made. Families studied included only a portion of the population but the collection of schedules was so planned as to give a random sample of the families meeting the requirements for inclusion.

The farm sections studied were chosen on the basis of a type of agriculture predominant or widely prevalent. When the project is completed, 14 types of farming will have been so examined.

In Magazines

ACCORDING TO an article by Neil M. Clark (*Soil Saving Goes Local* in COUNTRY GENTLEMAN for November), the work of the Soil Conservation Service has literally been taken over by the farmers themselves. Thirty-eight States have now adopted legislation which enables the Secretary of Agriculture to authorize the spending of Federal erosion-control funds in them.

Generally, this legislation provides for the appointment of State soil-conservation committees; the setting up of soil-conservation districts by groups of 25 farmers; local elections to determine whether a majority of the landowners want such districts; and the machinery for self-government within the districts, and for obtaining assistance from Federal, State, and other governmental agencies. In addition, some of the State laws have clauses which enable farmers in a district to regulate and restrict land uses that they find to be against the public interest.

This is the groundwork for scientific, long-range land use planning by the farmers and the SCS. Mr. Clark says it answers the qustion: "Why not leave leadership and control in local hands, but fix it so that Washington, or any other agency, could furnish technical guidance when needed—material, labor, and equipment, too, if these happened to be available?"

"THE DISPOSSESSED are walking the roads of America—refugees not of war, but of a revolution that is turning agriculture into an industry . . ." is the theme of Hazel Hendricks' Farmers Without Farms in the October ATLANTIC MONTHLY. The total now numbers half a million. Forty thousand are expected to join each year. Soil depletion, low farm prices, loss of export markets, unsound tenure system, surplus farm population are described as causes. Mechanization of American farms is termed an outstanding contributing factor.

For meeting the problem, Miss Hendricks recommends, in addition to an expanded Farm Security Program to administer to the needs of seasonal farm laborers, and extension of social-security, wage-hour, and labor-relations laws for all agricultural workers, vigorous action along 4 broad lines: Development of good new land for the future; strengthening of the tenure system; termination of the present exploitation of the farm laboring population, and acknowledgment that most of our disadvantaged rural people must look outside of agriculture for a livelihood.

U. S. GOVERNMENT PRINTING OFFICE: 1940

Our thoughts may ordinarily be concentrated upon the cities and the hives of industry, upon the cries of the crowded market place and the clangor of the factory, but it is from the quiet interspaces of the open valleys and the free hillsides that we draw the sources of life and of prosperity, from the farm and the ranch, from the forest and the mine. Without these every street would be silent, every office deserted, every factory fallen into disrepair. And yet the farmer does not stand upon the same footing with the foreste and the miner in the market of credit. He is the servant of the seasons. Nature determines how long he must wait for his crops, and will not be hurried in her processes. He may give his note, but the season of its maturity depends upon the season when his crop matures . . . And the security he gives is of a character not known in the broker's office or as familiarly as it might be on the counter of the banker.

—Woodrow Wilson

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